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ABSTRACT

This project attempts to develop, evaluate and implement methods and materials for the automated analysis of the stylistic characteristics of counselor verbal behavior and its effects on client verbal behavior within the counseling interview. To achieve this purpose, the project designed a system of computer programs, the DISCOURSE ANALYSIS SYSTEM. The system accepts uncoded typescripts of counseling interviews as input and performs the following functions: (1) divides counselor and client responses into independent clause units; (2) classifies response units into subcategories; (3) tabulates parameters of each speaker's contributions; (4) provides a summary tabulation of counselor and client responses; (5) classifies counselor response units into 14 empirically derived categories; (6) provides a cumulative record of selected client response types in relation to counselor response types; (7) provides a process-outcome analysis relating counselor style to changing patterns of client responses; and (8) rates counselor verbal behavior in accordance with three counseling styles. (Author)

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AUTOMATED ANALYSIS OF COUNSELOR STYLE AND EFFECTS: The development and evaluation of methods and materials to assess the stylistic accuracy and outcome effectiveness of counselor verbal behavior

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CHAPTER I

COUNSELING STYLE AND EFFECTS

The Problem

Until recently, efforts to conceptualize the counseling task have focused on ambiguously defined process and outcome variables. Based upon Rogers (1957) theoretical formulations, it has been widely assumed that a counselor who manifests genuineness, unconditional positive regard and accurate empathy and communicates these characteristics to the client will facilitate client growth toward self actualization. Myriad attempts to objectively quantify and evaluate counselor and trainee manifestations of these hypothetical constructs have been made (Halkides, 1958; Barrett-Leonard, 1959; Strupp, 1960; Truax, 1961; Carkhuff and Truax, 1965a, 1965b; Truax and Carkhuff, 1965; Martin, Berenson and Carkhuff, 1966; Berenson, Carkhuff and Myrus, 1966; Gross and DeRidder, 1966; Holder, Carkhuff and Berenson, 1967; VanderVeen, 1967; Demos, 1967; Carkhuff and Alexik, 1967; Berenson, Mitchers and Moravec, 1968).

These and similar studies, however, were characterized by two inherent fatal weaknesses (a) an apriori assumption was made that the process variables were operating and then raters of similar persuasion were trained in procedures to assess the manifest strength of the variables; and (b) although rater agreement has frequently been high, serious questions concerning validity must be raised due to the contaminating effect of rater bias (Hackney, 1969) and self-fulfilling expectations (Rosenthal and Jacobson, 1969). Hackney (1969) demonstrated that ratings on accurate empathy, positive regard, warmth and "appropriateness" all yielded essentially the same factor matrices when subjected to a factor analytic design!

Because of weaknesses in traditional conceptual formulations, it became clear that more rigorous experimental approaches were needed to evaluate counselor and trainee performance. The need was to operationally specify and classify process variables (independent variables) in order to assess their effects on client behavior (dependent variables). In a landmark study, Zimmer, Wightman and MacArthur (1970) subjected ratings of the verbal responses of three counselors of diverse theoretical orientation to a factor analytic design. They identified, operationally defined and classified 31 discrete classes of counselor responses. In a separate but related study Zimmer and Pepyne (1971) provided evidence that significant differences existed in the manifest behavior of three expert counselors while each was counselling the same client. Moreover, the observed behavioral differences in manifest strategies were directly related to the respective theoretical orientations of the counselors. These findings tended to explode the previously accepted myth that what occurs in counseling is affected by the "expertise" of the counselor and characteristics of the client, not by the counselor's theoretical

orientation or counseling style (Fiedler, 1951; Cartwright, 1966). Finally, Hakstian, Zimmer and Newby (1971) provided evidence suggesting that the same client responded and reacted differently on seven outcome variables as a result of counseling with three expert counselors. These studies strongly suggest a need for a new approach, that of eclecticism, characterized by operationally defined counseling strategies and responses (process variables) that relate to specifiable changes in client behavior (outcome variables). The evolving research and evaluation paradigm may be conceptualized as illustrated in Figure 1.

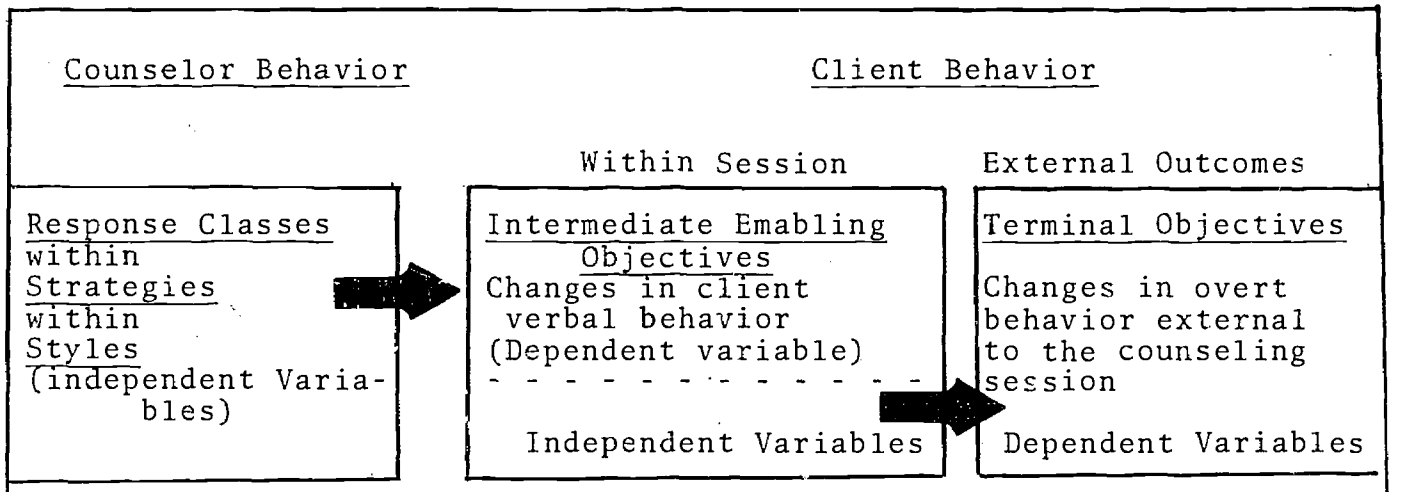

Figure 1. Counselor behaviors constitute the primary independent variables and are defined as functionally and syntactically related responses categorized into strategies and styles of counselor behavior. When counselor strategies and/or styles (independent process variables) are manipulated what observable changes can be predicted in client verbal behavior (dependent intermediate outcome variables) within the interview? Finally, what changes in client verbal behavior within the interview (independent intermediate variables) are predictive of specifiable overt behavioral changes external to the counseling interview (dependent terminal outcome variables)?

Building upon the pioneering research of Zimmer et al, Pepyne (1971) has recently demonstrated an integrated model for counselor research, education and evaluation. This model focuses upon trainee acquisition and utilization of empirically derived, operationally defined response classes, strategies and styles of counselor behavior. Concurrently, a computer based system for the sequential automated monitoring of counselor repertoire development (SAMOCORD) has been developed and evaluated (Pepyne, 1970) to implement the Counselor Repertoire Development (CRD) training model. Components, activity flow and component-trainee interactions in the CRD System are illustrated in Figure 2.

The strength of the CRD System is its power in facilitating trainee acquisition of operationally defined process variables and automated assessment of trainee development in achieving accuracy in operating within a given counseling style. A weakness, however,

THE COUNSELOR REPERTOIRE DEVELOPMENT SYSTEM

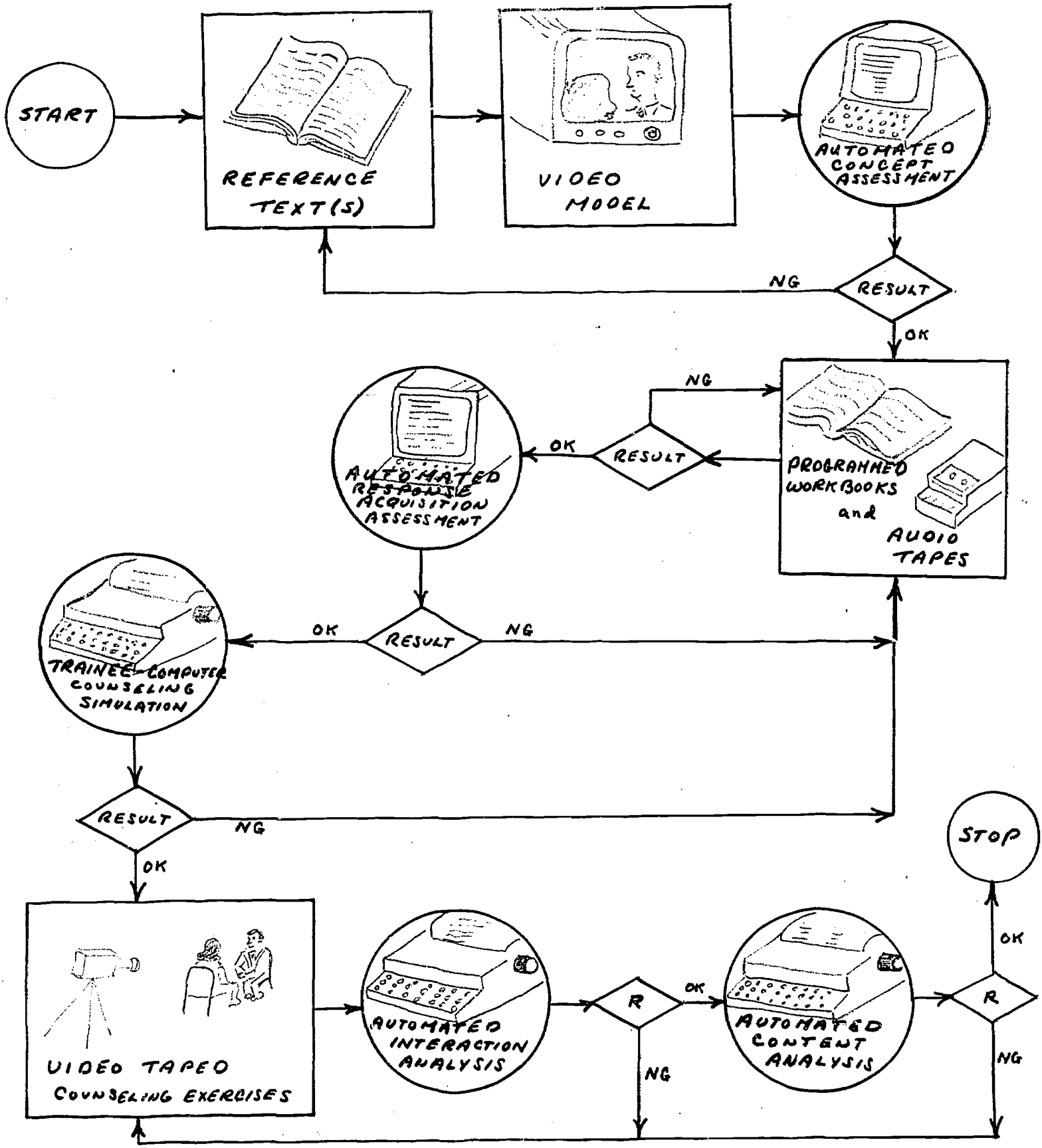

Fig. 2. Flowchart of trainee-component interactions in the CRD system.

was in the system's inability to objectively evaluate and assess the effects of process variables (counselor behavior) on subsequent realization of intermediate enabling objectives (changes in client verbal behavior). An empirical approach to counselor education and evaluation cannot rest on the assumption that desirable outcomes necessarily follow from the counselor's stylistic accuracy. Empirical functional analysis of counselor behavior have yielded operationally defined criteria by which to identify and evaluate process variables. What was needed were the methods and materials to precisely identify and operationally define the effects of specific counselor behavior (independent variables) on subsequent client verbal behavior (dependent variables). The present project was dedicated to meeting this functional need.

Objectives and Purposes

The general purpose of this project was to develop, evaluate and implement methods and materials for the automated analysis of stylistic characteristics of counselor verbal behavior and concomitant effects on client verbal behavior within the counseling interview. This general purpose was accomplished through the development of a system of computer programs, DISCOURSE ANALYSIS (See Appendix A), which accepts uncoded typescripts of counseling interviews as input and performs the following functions:

1. Divides counselor and client responses into independent clause units.

2. Classifies response units into subcategories in accordance with person of the subject; tense of the verb; cognitive, affective or neutral mode; valence of affect; and preselected topics.

3. Tabulates parameters of each speaker's contributions, including, percent of words and clause units contributed; type/token ratio; average number of words per response unit; percent of words over two syllables, etc.

4. Tabulates a summary of counselor and client response units by person, tense, mode and valence.

5. Classifies counselor response units into 14 empirically derived categories and computes the average number of words used in each type response.

6. Prints a cumulative record of selected client response types in relation to counselor response types.

7. Provides a process-outcome analysis relating counselor style to changing patterns of client responses.

8. Rates counselor verbal behavior in accordance with three selected counseling styles (Client Centered; Gestalt; Rational Emotive).

This report describes in detail the procedures and methods employed to develop, evaluate and implement the DISCOURSE ANALYSIS system.

General Methodology

Content analysis is a research technique designed to systematically quantify and order the content of verbal communication. Typically it involves procedures for dividing verbal data into units, assigning units to categories, summarizing coded units and deriving inferences concerning the significance of these summations. A basic research value of content analysis procedures is that they force the investigator to objectively and unambiguously define the bases upon which inferences are made.

The content analysis of counseling interviews has important implications for a functional understanding of the counseling process and the systematic evaluation of counselor/client behavior (Auld and Murray, 1954). However, as Marsden has concluded, "system after system has been developed and presented in one or two demonstration studies, only to be buried in the literature unused even by its author [1965, p.315]". The major reason for the sparse and sporadic use of content analysis systems has been the lack of efficient and effective tools to facilitate the process. Somewhat analogous to the statistical process of multiple regression or factor analysis, content analysis performed manually is laborious, monotonous and extremely time consuming.

Automated Verbal Data Analysis

In recent years, utilization of computers has made the content analysis of verbal data a more manageable process. The most apparent characteristic of computers, their ability to manipulate symbols reliably at electronic speeds needs no further elaboration. But as Holsti (1967) emphasizes, less obvious but of even greater importance are other advantages derived from computer applications to natural language analysis:

"1. Computers impose rigor and discipline on the formulation of research.

2. When data are reduced to computer readable form they are amenable to reanalysis as often and for as many different purposes as desired.

3. The use of computers enables the investigator to undertake very complex problems, such as contingency analysis involving numerous variables, which often cannot be done reliably by hand.

4. Data in computer readable form can readily be reproduced and exchanged between scholars.

5. The use of the computer frees the scholar from much of the most laborious and nervous aspects of his research [Holsti, 1967, p. 115]."

During the sixties several systems, such as the GENERAL INQUIRER (stone, Bales, Namenworth and Ogilvie, 1962), WORDS (Harway and Iker, 1965) and others were developed for the automated analysis of natural language. In addition, several computer languages with expanded list processing capabilities such as LISP, SNOBAL, PL/I, COMIT, PILOT, etc. also became available. Initially these systems and languages generated high hopes and expectations among potential users. However, when generalization to other installations were attempted it became apparent that extensive revisions, installation of new compilers and concomitant expenditures of time and money mitigated against their widespread adoption or use.

To overcome the deficiencies of earlier systems, the DISCOURSE ANALYSIS system has been designed to be a versatile system with potentially wide applicability. All programs incorporated in the system are written in FORTRAN IV. Since FORTRAN IV compilers are available at nearly all computer installations, potential users can implement the DISCOURSE ANALYSIS system with minimum modification to existing programs and in some cases with no change at all.

Computer Requirements

The DISCOURSE ANALYSIS system was developed at the University Computer Center, University of Massachusetts, Amherst. It is currently operational on CDC 3600 or CDC 3800, 64K, DRUMSCOPE systems. The main program, DISCANAL, and its related subroutine require 42K words of core (one word equals eight characters). In order to process natural language words of up to 16 characters, double precision variables were used. Programs in the DISCOURSE ANALYSIS system also utilize standard CDC system subroutines and functions.

In order to fully implement the DISCOURSE ANALYSIS system 12 scratch units are required. Other peripheral unit requirements include a card reader, a line printer and a card punch. Due to the nature of the CDC 3600/3800 systems an IBM 026 key punch was used in preparing both program and data cards.

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SUMMARY

The general purpose of this project was to develop, evaluate and implement methods and materials for the automated analysis of the stylistic characteristics of counselor verbal behavior and concommitant effects on client verbal behavior within the counseling interview. A system of computer programs, the DISCOURSE ANALYSIS SYSTEM, was designed for this purpose.

The DISCOURSE ANALYSIS SYSTEM accepts uncoded typescripts of counseling interviews as input and performs the following functions:

1. Divides counselor and client responses into independent clause units (93% agreement with human coders).

2. Classifies response units into subcategories in accordance with person of subject; tense of verb; cognitive, affective or neutral mode; valence of affect; and preselected topics (86% overall agreement with human coders; 93% to 97% agreement within individual categories).

3. Tabulates parameters of each speaker's contributions, including percent of words and clause units contributed, type/token ratios, average number of words per response unit, percent of words over two syllables, etc.

4. Provides a summary tabulation of counselor and client responses by person, tense, mode and valence.

5. Classifies counselor response units into 14 empirically derived categories (89% agreement with human coders) and computes the average number of words used in each type of response.

6. Provides a cumulative record of selected client response types in relation to counselor response types.

7. Provides a process-outcome analysis relating counselor style to changing patterns of client responses.

8. Rates counselor verbal behavior in accordance with three selected counseling styles (Client-Centered; Gestalt; and Rational Emotive).

The DISCOURSE ANALYSIS SYSTEM is written in FORTRAN IV to permit implementation on a wide variety of computer installations. The system is designed to combine the rigor of behavioral research with the wide applicability of classical content analysis procedures. Experience to date indicates that it is a valid and reliable system with potentially broad interdisciplinary appeal.

CHAPTER II

DEVELOPMENTAL AND EVALUATIVE PROCEDURES

Unitizing Verbal Data

Defining the Unit. Dividing verbal data into psychologically meaningful, objectively defined units is a necessary first step in content analysis. Many verbal units have been suggested for automated analyses. Stone, Bales, Namenworth and Ogilvie (1962) and Zimmer and Cowles (1972) developed programs in which the sentence constituted a unit of analysis. While the sentence may serve reasonably well as an objectively defined unit in the analysis of published, pre-edited material, it falls short as a reliable unit in the analysis of oral discourse. The capricious syntactic patterns of oral conversation place too great a burden on the punctuation skills and related biases of the transcribing typist. Even when reliably transcribed oral sentences yield units of widely varying size and differing degrees of semantic ambiguity which defy objective classification. Waskow (1962) offered an approach which further confused the issue by defining a response unit as a client response bounded by counselor responses. Pepyne (1970), Zimmer and Cowles (1972) and others have gone to the opposite extreme, using individual words as the verbal units in computer based content analysis systems. While words constitute objective reliable units, taken singly they fail to provide a psychologically meaningful basis for analysis.

A response has been defined as the smallest meaningful unit of behavior. What was needed was such a response unit for the automated analysis of verbal behavior. Fries (1952) defined the simple sentence as the minimum utterance that can be understood. Auld and White (1956) delimited Fries definition and defined a verbal unit as "an independent clause, standing by itself or with one or more dependent clauses [1956, p. 273]." To implement this definition they developed the following nine linguistic rules for dividing counselor and client verbalizations into clause units:

"1. The unit consists of an independent clause standing by itself or occurring along with one or more dependent clauses.
2. A clause is a statement containing a subject (explicitly stated) and a predicate, with or without modifiers.
3. An independent clause can often be distinguished from a dependent clause by the facts that (a) when two independent clauses are connected, the second may be introduced by a coordinating conjunction or a conjunctive adverb and (b) dependent clauses, which are always used as parts of speech are introduced by subordinating conjunctions or by pronouns such as who, which or that.
4. Some combinations of words without an expressed subject and predicate can make complete sentences and therefore units. These are called elliptical sentences.

Examples:
(a) "Speak" (a command);
(b) "Good!" (an exclamatory sentence);
(c) "What" (a supplement question);
(d) Therapist: "What room did they give you?"
Patient: "The same one I had before."
(Patients utterance is a completive sentence)

5. False starts do not count as separate units. Example: "And Wednesday night uh I more or less -- I didn't high pressure him" (one unit). "And Wednesday night uh I more or less" is not scored as a separate unit. Linguists call the construction "an acolonthon."
6. Utterances lacking some essential feature of a complete sentence because of an interruption by the other speaker or a lapsing into silence are considered separate units wherever the meaning is clear. Linguists call this construction "aposiopesis". Example: "And he would bring the female to the point where she would become very erotic--". When the speaker has not said enough to make his meaning clear, we do not consider his utterance a unit, and we bracket the phrase.
7. Affirmations and negations are not counted as separate units if the patient goes on to amplify or explain. Example: "Yes, I was happy at home" (one unit). But if the affirmation stands alone it is separately unitized. Example: Therapist: "Did the treatment help you?' Patient: 'Unh huh./ I was, I was strictly on an ulcer diet/' (two units for patients utterances).
8. Phrases like you know, I guess and isn't it when added on to a sentence are not considered separate units. Example: 'Some very serious thing may be happening, you know.'
9. If one independent clause is interrupted parenthetically by another independent clause, each is scored as a separate unit. Example: 'And the uh -- again I didn't uh go to any frenzy or have any all-out emotional exhibition on my part, except that I enjoyed it./ But it wasn't too obvious, I don't imagine./ I enjoyed it in a passive way, I guess you'd say./' This example is typical in its complexity. The false start at the beginning is not considered a unit. One unit is: 'But it wasn't too obvious I don't imagine.' A second unit is: 'Again I didn't go to any frenzy or have any all-out emotional exhibition on my part, except that I enjoyed it--enjoyed it in a passive way, I guess you'd say.'

As explained in Rule 8, the phrases, 'I don't imagine' and 'guess you'd say' are not considered separate units [Auld and White, 1956, pp. 273-275]."

A tenth rule suggesting that each five seconds of silence might also be considered a response unit was not applied in this study.

Auld and White (1956) also provided evidence of the reliability of this unitizing procedure. Further evidence of the reliability of the unitizing procedure has been provided by Pepyne (1968) and Crowley (1970). Because the Auld and White method appeared to be

a reliable procedure for identifying psychologically meaningful units it was adopted for use in this project.

Establishing Criterion Performance. To establish a standard of unitizing performance to which computer output could be compared, two human coders were trained to a minimum criterion of 90% agreement in unitizing five consecutive 30 minute experimental interviews. Each coder worked independently and coded only client responses. Table 1 summarizes coder agreement at the conclusion of the training program.

TABLE 1

RELIABILITY OF UNITIZING BY HUMAN CODERS AFTER CRITERION TRAINING

Interview I.D.	Number of agreed on units	Number of units marked by coder 1 but not by coder 2	Number of units marked by coder 2 but not by coder 1	Percent of agreement of coder 1 with coder 2	Percent of agreement of coder 2 with coder 1
1.	126	5	2	96%	98%
2.	380	5	15	99%	96%
3.	247	15	20	94%	93%
4.	343	17	23	95%	94%
5.	355	14	17	96%	95%
Summary Tables	1451	56	77	96%	95%

After the training program each pair of coded typescripts was reviewed by a committee consisting of the principal investigator and the two coders. Disagreements in coding were resolved by consensus or majority vote. Thus five criterion coded interview typescripts were developed for use in computer program development.

Automated Unitizing. The five interviews unitized by the human coders were converted to computer readable form on punched data cards. An initial version of a computer program, SUBROUTINE CLAUSE, was developed and incorporated into a modified version of a program originally developed by Zimmer and Cowles (1972) to read verbal data, perform frequency counts, etc. The interviews were then unitized by the computer program. As expected, initial output fell far short of the criterion standard of 90% agreement with the human coders. Employing an iterative process (program modifications, rerun data, compare output with criterion, program modifications, rerun data, etc, etc., etc.) SUBROUTINE CLAUSE was finally developed to the required standard of agreement.

Cross Validation. Five new experimental interview typescripts were coded independently by the two human coders. Following independent coding, disagreements were resolved in accordance with the procedure previously described. Uncoded typescripts of the five interviews were punched on data cards, one line of text to a card. (Rules for keypunching data are listed in Appendix B.) For a more precise check on the consistency of computer and human coder agreement and to assess the potential validity of subsequent partial analyses, each interview was analyzed in five segments of six minutes each. Results of the agreement between the results of the human coders and the output of SUBROUTINE CLAUSE are presented in TABLE 2. A comparison of the data in Table 1 and Table 2 reveals that computer agreement with the composite results of the human coders (93%) was about as high as the agreement of the human coders with each other (96%; 95%). This is impressive in as much as the computer output was compared against a composite performance which provided a somewhat more rigorous criterion.

CLASSIFYING CLAUSE UNITS

Defining Response Classes. In a recent review, Salzinger (1967) emphasized that "response class is an indispensible concept for the examination of verbal behavior [p. 53]." For purposes of this project a verbal response class was defined as a group of similar verbal responses (response class members) possessing common characteristics amenable to objective, operational definition. To facilitate the functional analysis of both client and counselor verbal behavior, appropriate categories were sought to structure a relevant classification system.

Certain characteristics of client verbal behavior have been suggested as markers of therapeutic movement in counseling. Included among these are the following characteristics:

TABLE 2

VALIDATION OF AUTOMATED UNITIZING

Interview I.D.	Six Minute Segments	Number of Agreed on Units	Units marked by computer but not by humans	Units marked by humans but not by computer	Percent of agreement of computer with humans	Percent of agreement of humans with computer
6	1st	85	7	9	92%	90%
	2nd	64	6	6	91%	91%
	3rd	72	9	15	81%	83%
	4th	69	7	7	91%	91%
	5th	90	1	2	99%	98%
	all	380	30	39	93%	91%
7	1st	49	4	4	92%	92%
	2nd	52	6	2	90%	96%
	3rd	45	7	5	87%	90%
	4th	53	4	5	93%	91%
	5th	32	2	2	94%	94%
	all	231	23	18	91%	93%
8	1st	106	2	1	98%	99%
	2nd	87	8	7	92%	93%
	3rd	92	3	2	97%	98%
	4th	91	8	5	92%	95%
	5th	93	4	7	96%	93%
	all	469	25	22	95%	96%
9	1st	43	6	1	88%	98%
	2nd	29	1	2	97%	94%
	3rd	47	5	4	90%	92%
	4th	45	3	3	94%	94%
	5th	56	2	3	97%	95%
	all	220	17	13	93%	94%

10	1st	75	1	2	99%	97%
	2nd	63	8	5	89%	93%
	3rd	51	5	5	91%	91%
	4th	54	9	9	86%	86%
	5th	40	5	4	89%	91%
	all	283	28	25	91%	92%
Summary Totals		1583	123	117	93%	93%

1. Self exploration and relevation (Rogers, 1961; Jourard, 1964; Carkhuff, 1969, 1972, 1973).
2. Present time perspective (Rogers, 1961; Perls, 1969, 1973; Ellis, 1962).
3. Free expression of emotions (Rogers, 1961; Perls, 1969, 1973; Fagan & Shepherd, 1970; Carkhuff, 1972).
4. Cognitive deliberation and decision making (Ryan and Krumboltz, 1964; Ellis, 1962; Carkhuff, 1973).
5. References to topics relevant to the client's current life situation (eg. home and family, school and education, job and career, personal-social interactions, sex, etc.)

These five characteristics served as the basis for the categories used in the response classification system developed in this project. The general response categories used are outlined in Figure 3.

Determining Person and Tense. The subject and predicate of each clause was identified in this project in accordance with conventional rules of grammatical parsing. However, in accordance with unitizing rule #8, phrases such as "I think", "I mean", "I guess", "I don't know", "you know", "isn't it" were disregarded when used to introduce or tag an otherwise complete response unit.

For the purposes of this project clauses were classified according to person of the subject by the following rules:

A clause was defined as ....

1. a first person response if the personal pronouns "I" or "we" were used as the subject.
2. a second person response if the personal pronoun "you" served as the subject.
3. a third person response if any other word(s) served as the subject.

OUTLINE OF CATEGORIES IN RESPONSE CLASSIFICATION SYSTEM

I. Person of subject of the response
   A. First - "I" or "We" as subject
   B. Second - "You" as subject
   C. Third - other subject

II. Tense of predicate
   A. Past
   B. Present
   C. Future

III. Mode of expression
   A. Affective - expressions of positive or negative emotions
   B. Cognitive - expressions of intellectual activity
   C. Mixed -(both affective and cognitive)
   D. Neutral -(neither affective nor cognitive)

IV. Valence of affect
   A. Positive - pleasurable, approach posture.
   B. Negative - unpleasant, avoidance or attack posture.
   C. Neutral - (neither positive nor negative)

V. Selected topics
   A. School and education
   B. Home and family
   C. Other

Fig. 3. Standard grammatical rules were used in defining person of subject and tense of verb. Special dictionaries were prepared for the determination of mode, valence, and topic classifications. See Appendix C.)

Clauses were classified as present, past or future oriented responses in accordance with these rules:

A clause was defined as a ....

1. past oriented response if the principle verb ended in the letters "ed" or if any of the following words were included in the simple predicate:

ate	got	sat
been	had	saw
bit	heard	sent
bought	hung	spoke

built	kept	stole
came	knew	sank
caught	laid	sung
did	left	sunk
done	lit	swam
drank	made	taught
drove	paid	thought
drunk	ran	was
felt	rode	went
found	said	were
gave	sank	wrote

2. future oriented response if the simple predicate included the auxiliary verbs "shall" or "will", or the verb "going" followed by an infinitive.

3. present oriented response if the clause did not meet criteria for past or future oriented responses.

The key words used in these rules to determine the person or tense classification of a clause may be expressed or implied. For example:

Counselor: "You are angry?"
PERSON = SECOND
TENSE = PRESENT

Client: "No."
PERSON = FIRST
TENSE = PRESENT

The client's response, "No", is assumed to imply the full response, "No, I am not angry."

These rules evolved from a reciprocal process of computer program and rule development. The units previously identified by automated analysis of the first five experimental interviews were used as data for developmental purposes. Two human coders, former high school English teachers, independently classified each unit according to person and tense. The coders utilized conventional grammatical principles in their coding. All counselor and client response units were classified. SUBROUTINE PARS, originally developed by Cowles, was modified and updated to perform the parsing requirements of the analysis. In order to apply the basic rules it was necessary that the program have the capacity to associate each word in the clause with a part of speech. SUBROUTINE PERTNS was then developed to apply the rules and classify the clause according to person and tense.

Using the composite results of the human coders as a criterion standard, an iterative process, similar to that used in unitizing, was employed to reach the required 90% average agreement with the human coders.

Determining Mode, Valence and Topic. A great variety of words have been suggested as indicative of mode, valence or topic of a verbal response. (Pepyne, 1968; Crowley, 1970; Zimmer and Cowles, 1972). From these and other sources (Perls, 1969, 1973; Carkhuff, 1969, 1972, 1973; Ellis, 1962; Harris, 1967) five key word dictionaries were developed (See Appendix C) to operationalize the following definitions:

Positive affect word - a word which connotes a favorable or pleasurable condition to be enjoyed, approached or admired.

Negative affect word - a word which connotes unpleasantness to be avoided or attacked.

Cognitive word - a word which connotes intellectualization, or cerebral processes.

School reference - a word which refers to school, educational materials or facilities, professional personnel, study, courses, schedules, activities, etc.

Family reference - a word referring to home, parents or near kin.

To keep dictionaries as small but as comprehensive as possible, word stems were used as entries whenever possible. Word stems are key words stripped of the following suffixes: "s", "e", "es", "ed", "ly", "ing", "ful", and "fully". The resultant entry totals were negative affect, 288; positive affect, 173; cognitive, 187; school references, 74; and family references, 35.

A clause was classified as ....

1. an affective mode response if it contained a word from the positive or negative affect word dictionary or contained a form of the words "feel" or "seem".

2. a cognitive mode response if it contained a word from the cognitive word dictionary, or a word ending in the suffix "ology".

3. a mixed mode response if it fulfilled the criteria of an affective and cognitive response.

4. a neutral mode response if it did not fulfill the criteria of either an affective response or a cognitive response.

5. a positive valence response if it contained a word from the positive affect dictionary which was not preceded by the word "not" or a contraction thereof.

6. a negative valence response if it contained a word from the negative affect dictionary which was not preceded by the word "not" or a contraction thereof, or a word from the positive affect dictionary preceded by the word "not" or a contraction thereof.

7. a mixed valence response is it fulfilled the criteria of both a positive and negative valence response.

8. a neutral valence response if it failed to fulfill the requirements of either a positive or negative valence response.

9. a school reference response if it contained a word in singular or plural form from the school reference dictionary.

10. a family reference response if it contained a word in singular or plural form from the family reference dictionary.

11. a combination reference response if it fulfilled the criteria of both a school reference response and a family reference response.

12. an other reference response if it failed to fulfill the criteria of both a school reference response and a family reference response.

SUBROUTINE MDTPC was developed to perform the automated mode, valence, topic classificat s. Like the developmental processes described previously, comp r program and classification rules evolved in a reciprocal iterative manner. Results of human coding of the first five experimental interviews provided the criterion performance against which the developing program and rules were evaluated. The developmental process continued until an average 90% agreement was reached in all categories.

Cross Validation of Automated Classification. All units previously identified by the computer in the second set of five experimental interviews were submitted to the two human coders who independently classified them according to person, tense, mode, valence and topic. Disagreements between the human coders were resolved in accordance with the procedure previously described. The resultant 2124 coded units served as the criterion standard against which computer output was compared.

Similar to the unitizing cross validation process, uncoded typescription of the interviews served as input data. The one difference in this case, however, was that for purposes of topic classification, where a topic key word served as the antecedent for a pronoun it was inserted in parentheses after the pronoun. The following example is indicative of the procedure used:

Client: "They (parents) were never too demanding."

With this exception, no precoding was used. For this evaluation

both counselor and client responses were included. Again, each interview was analyzed in 5 segments of six minutes each. Results of agreement between the composite classifications of the human coders and computer classification are presented in Table 3. Of the 2124 units coded, human coders and computer program were in total agreement on the coding of 1802 units (85%). In individual categories agreements were as follows: person 93%; tense 93%; mode 97%; valence 97%; and topic 97%.

TABLE 3

VALIDATION OF AUTOMATED CLASSIFICATION

INTERVIEW	SEGMENT	NUMBER OF UNITS CODED	Number and Percent of Classification Agreements					
			Total Agreement	Person	Tense	Mode	Valence	Topic
6	1st	111	79(71%)	96(86%)	96(86%)	104(94%)	103(93%)	102(92%)
	2nd	93	74(80%)	86(92%)	86(92%)	90(97%)	89(96%)	90(97%)
	3rd	101	85(84%)	91(90%)	92(91%)	100(99%)	99(98%)	100(99%)
	4th	93	72(77%)	78(84%)	90(97%)	92(99%)	91(98%)	92(99%)
	5th	110	92(84%)	104(95%)	99(90%)	107(97%)	106(96%)	110(100%)
	all	508	402(79%)	455(90%)	463(91%)	493(97%)	488(96%)	494(97%)
7	1st	70	63(90%)	68(97%)	67(96%)	70(100%)	70(100%)	70(100%)
	2nd	72	56(78%)	68(94%)	63(88%)	71(99%)	69(96%)	71(99%)
	3rd	66	61(92%)	62(94%)	65(98%)	66(100%)	66(100%)	66(100%)
	4th	45	37(82%)	41(91%)	43(96%)	44(98%)	44(98%)	42(93%)
	5th	42	35(83%)	39(93%)	40(95%)	41(98%)	42(100%)	42(100%)
	all	295	252(85%)	278(94%)	278(94%)	292(99%)	291(99%)	291(99%)
8	1st	131	112(85%)	124(95%)	126(96%)	128(98%)	129(98%)	127(97%)
	2nd	103	93(90%)	98(95%)	97(94%)	99(96%)	99(96%)	96(93%)
	3rd	129	117(91%)	122(95%)	123(95%)	127(99%)	127(99%)	128(99%)
	4th	121	109(90%)	116(96%)	114(94%)	119(98%)	120(99%)	118(98%)
	5th	128	111(87%)	120(94%)	122(95%)	126(98%)	126(98%)	127(99%)
	all	617	542(88%)	580(94%)	582(94%)	599(97%)	601(97%)	596(97%)
9	1st	62	55(89%)	59(95%)	56(90%)	60(97%)	60(97%)	59(95%)
	2nd	39	29(74%)	35(90%)	37(95%)	38(97%)	38(97%)	37(95%)
	3rd	68	61(90%)	66(97%)	65(96%)	67(99%)	66(97%)	65(96%)
	4th	63	53(84%)	60(95%)	59(94%)	61(97%)	61(97%)	62(98%)
	5th	73	64(88%)	67(92%)	69(95%)	70(96%)	71(97%)	71(97%)
	all	305	262(86%)	287(94%)	286(94%)	296(97%)	296(97%)	294(96%)

10	1st	97	85(88%)	94(97%)	93(96%)	95(98%)	94(97%)	94(97%)
	2nd	84	71(85%)	79(94%)	77(92%)	82(98%)	81(96%)	82(98%)
	3rd	76	66(87%)	72(95%)	72(95%)	74(97%)	74(97%)	73(96%)
	4th	81	73(90%)	78(96%)	77(95%)	79(98%)	79(98%)	80(99%)
	5th	61	49(80%)	56(92%)	55(90%)	58(95%)	59(97%)	59(97%)
	all	399	344(86%)	379(95%)	374(94%)	388(97%)	387(97%)	388(97%)

Summary Totals

2124	1802(85%)	1979(93%)	1983(93%)	2068(97%)	2063(97%)	2063(97%)

Classifying Counselor Responses

Defining Counselor Response Classes. One of the major tasks in this project was to devise a counselor response classification system characterized by (a) demonstrated functional communalities and (b) identifiable syntactic characteristics. Zimmer, Wightman and MacArthur (1970) identified 31 types of counselor responses. Subsequently, Zimmer and Pepyne (1971) in an attempt to more parsimoniously describe important dimensions of counselor verbal behavior recast those 31 response types into six general categories:

1. Rational Analyzing
2. Eliciting Specificity
3. Confronting
4. Passive Structuring
5. Reconstructing
6. Interrogating

These six categories of counselor responses served to structure the classification system developed for purposes of automated analysis. Within these categories a total of fourteen counselor response classes which met the classification criteria were identified. The fourteen response classes, thought to be independent of theoretical orientation, were classified and defined as follows:

I. Rational Analyzing - information giving responses which establish the counselor as an authorative source of data, interpretation and identification of cause and effect relationship.

   A. Demonstrative Information Giving - a response containing a demonstrative pronouns as subject.

   B. Third Person Reference - a response containing a third person noun or pronoun as subject.

II. Eliciting Specificity - responses designed to elicit, urge, command or support specific verbal or non-verbal behaviors by the client.

A. Imperative - a response, implying "you" as subject, directing or commanding specific client behavior.

B. Ability Potential - a response suggesting specific behavior or achievements the client could or could not manifest.

III. Confronting - responses typified by contrasting of opposites and heightening conflict by specifying contradictions in client responses or changing the direction of discussion.

A. Confronting Reflection - a reflecting on previous client response(s) prefaced by such words as "but", "yet", "nevertheless", etc.

B. Joint Imperative - a response characterized by the words "let us" or the contraction "let's" which specifies a new direction or dimension of discussion.

IV. Passive Structuring - responses which convey the counselor's perceptions of the clients emotional or cognitive state or utterances which imply counselor attention, interest or support.

A. Simple Reflection - a response containing "you" as the subject which conveys the counselor's perception of the client's emotional or cognitive state.

B. Minimal Social Stimulus - utterances such as "mm-hmm", "uh-huh", "oh", "good", etc.

C. Self References - a response which reveals the counselors emotional or cognitive state characterized by the first person pronouns "I" or "we" as the subject.

V. Reconstructing - responses in which the counselor selectively refocuses selected aspects of previous client responses.

A. Accent - a response which restates a single word or phrase from a previous client response.

B. Restatement - a response which repeats at least 65% of the words in the preceding client response, typically substituting "you" for "I" and appropriately transforming the form of the verb.

VI. Interrogating - responses which pose direct or rhetorical questions to the client.

A. Probe - an interrogative response typically introduced by such words as "what", "when", "where", "why", "how", "who", "can", "could", and the like and punctuated by a question mark.

B. Rhetorical questions - a statement, verbalized as a question to make an assertion, typically tagged by such phrases as "isn't it", "don't we", "didn't you", etc.

SUBROUTINE COUNS was developed to implement this classification system. Typescripts of the interviews conducted by Carl Rogers, Frederick Perls and Albert Ellis and recorded on the films "Three Approaches to Psychotherapy"1 were used as experimental data. For developmental purposes each interview was divided into five segments of approximately equal length. Two human coders independently classified each counselor response in the first four segments of each interview. Disagreements between the human coders were resolved in conjunction with the principal investigator by consensus or majority vote. Classifications by the human coders served as criterion performance for SUBROUTINE COUNS. The first segment of each interview was used in developing the subroutine. An iterative trial and error process was employed until the required 90% agreement between computer output and human classifications was attained.

Cross Validation of Counselor Response Classifications. The second, third and fourth segments of each of the three interviews were classified by the revised version of SUBROUTINE COUNS. Agreement between human and computer classification is summarized in Table 4.

TABLE 4

AGREEMENT BETWEEN HUMAN AND COMPUTER CLASSIFICATIONS OF COUNSELOR RESPONSES

Counselor	Interview Segment	Number of Counselor Responses	Number of Agreements	%	Number of Dis-Agreements	%
Rogers	2	22	19	86%	3	14%
	3	27	26	96%	1	4%
	4	20	17	85%	3	14%
Perls	2	49	41	84%	8	16%
	3	36	30	83%	6	17%
	4	39	35	90%	4	10%
Ellis	2	32	31	97%	1	3%
	3	35	31	89%	4	11%
	4	32	30	94%	2	6%
Summary Totals		292	260	89%	32	11%

1/ Everett Shostrum, producer; distributed by Psychological Films, 205 West 20th Street, Santa Anna, California, 92706.

```
**********,**********,**********,**********,**********,**********,**********

***** CLAUSE NO,   27 FOR ROGERS
AND YOU DO HAVE YOUR FEELINGS,
PERSON  =   SECOND
TENSE   =   PRESENT
MODE    =   NEUTRAL
VALENCE =   NEUTRAL
TOPIC   =   OTHER
NUMBER OF WORDS IN CLAUSE=    6
TYPE OF RESPONSE = REFL,SIM

**********,**********,**********,**********,**********,**********,**********

***** CLAUSE NO,   28 FOR ROGERS
BUT YOU DON-T FEEL GOOD ABOUT THEM .
PERSON  =   SECOND
TENSE   =   PRESENT
MODE    =   AFFECT
VALENCE =   NEGATIVE
TOPIC   =   OTHER
NUMBER OF WORDS IN CLAUSE=    7
TYPE OF RESPONSE = REFL,CON

**********,**********,**********,**********,**********,**********,**********

***** CLAUSE NO,   53 FOR GLORIA
RIGHT, I HAVE A FEELING THAT YOU ARE JUST GOING TO SIT THERE AND LET ME STEW IN IT
PERSON  =   FIRST
TENSE   =   PRESENT
MODE    =   AFFECT
VALENCE =   NEGATIVE
TOPIC   =   OTHER
NUMBER OF WORDS IN CLAUSE=   19

**********,**********,**********,**********,**********,**********,**********

***** CLAUSE NO,   54 FOR GLORIA
AND I WANT MORE ,
PERSON  =   FIRST
TENSE   =   PRESENT
MODE    =   NEUTRAL
VALENCE =   NEUTRAL
TOPIC   =   OTHER
NUMBER OF WORDS IN CLAUSE=    4

**********,**********,**********,**********,**********,**********,**********

***** CLAUSE NO,   55 FOR GLORIA
I WANT YOU TO HELP ME GET RID OF MY GUILT FEELINGS ,
PERSON  =   FIRST
TENSE   =   PRESENT
MODE    =   AFFECT
VALENCE =   NEGATIVE
TOPIC   =   OTHER
NUMBER OF WORDS IN CLAUSE=   12

**********,**********,**********,**********,**********,**********,**********
```

Fig. 4. An excerpt from the clause analysis of the first six minute segment of the Rogers-Gloria counseling interview.

Of the 292 counselor responses classified, both humans and computer assigned 260 (89%) to the same counselor response class. A sample of an automated analysis is illustrated in Figure 4.

The computer program was found lacking in its ability to consistently identify three types of counselor responses: rhetorical questions, imperative responses and confronting reflections. These deficiencies should be amenable to correction by continued modification in SUBROUTINE COUNS. The time constraints of this project, however, did not permit such modifications to be made at this time.

SUMMARIZATIONS AND TABULATIONS

Counters, computational routines and a special subroutine called SUMMARY were designed to summarize and tabulate selected characteristics of counselor and client verbal behavior in each interview or interview segment analyzed. Summaries of Carl Rogers verbal behavior in a six minute interview segment are illustrated in Figure 5 and Figure 6.

SUBROUTINE SUMMARY was designed to summarize and tabulate responses of each participant by person, tense, mode and valence. An illustration of SUBROUTINE SUMMARY output is presented in Figure 7.

Among other options, summaries may be obtained from PROGRAM DISCANAL on punched card output. Six cards summarize 142 counselor response variables and four cards provide summaries of 114 client response variables.

RESPONSE TYPE SUMMARY FOR ROGERS

MINIMUM SOCIAL STIMULI	0	0 PERCENT	0.00 WORDS PER RESPONSE
ACCENT	0	0 PERCENT	0.00 WORDS PER RESPONSE
RESTATEMENT	1	3 PERCENT	8.00 WORDS PER RESPONSE
REFLECTION - SIMPLE	8	24 PERCENT	11.00 WORDS PER RESPONSE
REFLECTION - CONFRONTING	1	3 PERCENT	7.00 WORDS PER RESPONSE
REFLECTION - CAUSATION	1	3 PERCENT	8.00 WORDS PER RESPONSE
INFORMATIONAL	5	15 PERCENT	16.20 WORDS PER RESPONSE
IMPERATIVE	0	0 PERCENT	0.00 WORDS PER RESPONSE
PROBE - SIMPLE	3	9 PERCENT	5.00 WORDS PER RESPONSE
PROBE - RHETORICAL	0	0 PERCENT	0.00 WORDS PER RESPONSE
ABILITY POTENTIAL	0	0 PERCENT	0.00 WORDS PER RESPONSE
SELF REFERENCE	11	33 PERCENT	11.64 WORDS PER RESPONSE
JOINT IMPERATIVE	0	0 PERCENT	0.00 WORDS PER RESPONSE
THIRD PERSON INFORMATION	3	9 PERCENT	9.67 WORDS PER RESPONSE

Fig. 6. Classification summary of response types used by Rogers during the first six minutes of counseling interview with Gloria.

CLAUSE ANALYSIS MATRIX FOR ROGERS

MODE	VALENCE	PAST 1ST	PAST 2ND	PAST 3RD	PRESENT 1ST	PRESENT 2ND	PRESENT 3RD	FUTURE 1ST	FUTURE 2ND	FUTURE 3RD	SUMMARY TOTALS
AFFECTIVE	POSITIVE	0	0	0	9	6	9	0	0	0	24
	MIXED	0	0	0	9	0	0	0	0	0	9
	NEGATIVE	0	0	0	6	12	0	0	0	0	18
	SUMMARY TOTALS	0	0	0	24	18	9	0	0	0	52
MIXED	POSITIVE	0	0	0	0	0	3	0	0	0	3
	MIXED	0	0	0	0	0	0	0	0	0	0
	NEGATIVE	0	0	0	0	0	6	0	0	0	6
	SUMMARY TOTALS	0	0	0	0	0	9	0	0	0	9
COGNITIVE		0	0	0	0	3	0	0	0	0	3
NEUTRAL		0	0	0	18	6	6	0	3	3	36
SUMMARY TOTALS		0	0	0	42	27	24	0	3	3	100
		0			94			6			

ALL ENTRIES EXPRESSED AS PERCENTS OF TOTAL RESPONSES BY ROGERS

Fig. 7. A SUBROUTINE SUMMARY tabulation of person, tense, mode and valence characteristics of responses by Rogers during the first six minutes of counseling interview with Gloria.

CHAPTER III

ANALYZING AND ASSESSING INTERVIEW INTERACTIONS

A substantial body of research indicates that verbal behavior is amenable to systematic manipulation and can be considered a function of behavioral laws. (Greenspoon, 1962; Krasner, 1958, 1962, 1965, 1966, 1967; Salzinger 1959, 1967; Strong, 1964; Williams, 1964). Skinner (1957) has long contended that although verbal behavior is a highly complex human mode of response, it is, nevertheless, subject to the same sets of variables that affect nonverbal responses. While accepting that the requirements of social communication necessitate some correspondence between external stimulus events and verbal responses and some adherence to conventional rules of grammar, Skinner has argued that

> "...Verbal behavior is shaped and maintained by a verbal environment -- by people who respond to behavior in certain ways because of the practices of the group in which they are members...The resulting interaction between speaker and listener yield the phenomenon...of verbal behavior [1957, p. 226]."

Thus, verbal behavior may be conceptualized as operant behavior in that it is voluntary behavior which "operates" on the environment and is shaped and maintained by the consequences of its occurrence. Skinner (1957) presented a verbal behavior paradigm that takes into account the importance of antecedent conditions as well as subsequent reinforcement in "eliciting", maintaining and shaping verbal behavior. This Skinnerian model is illustrated in Figure 8.

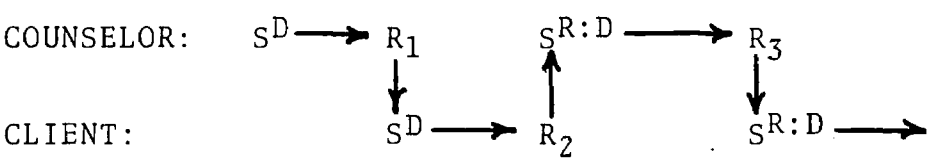

Fig. 8. The counselor and client are reciprocating participants. The first stimulus (S^D or discriminative stimulus), possibly the presence of the client, results in R_1, the counselors first response. This verbal response by the counselor serves as a S^D for R_2, the client's first response. This client verbal response, R_2, in turn serves as a reinforcer for the counselor's response (R_1) and a discriminative stimulus for further counselor responding (R_3), hence the designation $S^{R:D}$. Counselor response R_3 then serves as a reinforcer of the previous client response (R_2) and the occasion (S^D) for next client response.

In the influencial position treatise, The Counselor in a Changing World, Wrenn (1962) cited several verbal conditioning studies and concluded that "clearly what a person says is shaped by what is said to him, and in accordance with lawful patterns [p. 58]." Arguing from a behavioral perspective, Strong (1964) contended that

> "...the interview can be viewed as reciprocal verbal behavior usually between two people. The counselor talks, then the counselee talks, then again the counselor...in an interlocking pattern of verbal behavior [p. 660]."

Within this interactive process the counselor is seen as controlling the stimulus conditions of the interview. The counselor provides stimuli which are occasions for the client to emit verbal behavior which in turn generates consequences from the counselor. When as a consequence of certain client responses the counselor rewards the client with responses of increased attention, approval or affection the client "learns" new ways of talking about old problems.

The effective counselor may be conceptualized as one who arranges stimulus conditions (S^D) conducive to client verbalization, provides reinforcement (S^R) following client responses deemed situationally appropriate and extinguishes (does not reinforce or mildly punishes) client responses deemed inappropriate in terms of his theoretical orientation. In essence, counseling may be viewed as the management of contingencies of client verbal behavior; and, counseling research and evaluation as the functional analysis of interacting counselor and client verbal behavior. This suggests that a cumulative record could provide a valuable research tool to analyze and further explore client verbal behavior in the interview as a function of counselor behavior.

An Automated Cumulative Record of Client Verbal Behavior

SUBROUTINE SPOTTY was developed and incorporated into the DISCANAL program to provide a cumulative record of selected types of verbal responses. The researcher using the program has the option of specifying the person, tense, mode, valence and topic of the critical response class to be studied. Each time the client emits a verbal response the graph line is extended horizontally one unit. If the response meets the criteria of a critical response as specified by the researcher, the graph line moves vertically up one unit as well. Counselor responses are expressed as letters and appear on the record directly above (or before after the 25th critical response) the client response they followed. Figure 9 illustrates a cumulative record of Gloria's verbal behavior during the first six minute segment of the interview with Carl Rogers. The critical response class in this case is specified as client responses classified as first person, present tense, affective mode.

ROGERS AND GLORIA

CLAUSES

ANALYSIS FOR ROGERS

TOTAL CLAUSES= 33
AVERAGE CLAUSE LENGTH= 10.58
SHORTEST CLAUSE= 2 WORDS
LONGEST CLAUSE= 29 WORDS

TOTAL CLAUSES IN THIS SEGMENT = 97
PERCENT OF CLAUSES CONTRIBUTED = 34

TOTAL WORDS= 349
NO. DIFFERENT WORDS= 148
TYPE/TOKEN RATIO= 0.42
AVE. WORD LENGTH = 3.92

TOTAL WORDS IN THIS SEGMENT = 1192
PERCENT OF WORDS CONTRIBUTED = 29
PERCENT OF WORDS OVER 5 LETTERS = 18

PERSON OF SUBJECT

PERSON 1	14	42 PERCENT
PERSON 2	10	30 PERCENT
PERSON 3	9	27 PERCENT

TENSE OF VERB

PAST	0	0 PERCENT
PRESENT	31	94 PERCENT
FUTURE	2	6 PERCENT

MODE

NEUTRAL	12	36 PERCENT
COGNITIVE	1	3 PERCENT
AFFECTIVE	16	48 PERCENT
MIXED	4	12 PERCENT

VALENCE OF AFFECT

POSITIVE	7	21 PERCENT
NEGATIVE	8	24 PERCENT
MIXED	2	6 PERCENT

TOPIC

SCHOOL REFERENCES	0	0 PERCENT
FAMILY REFERENCES	0	0 PERCENT
COMBINATION	0	0 PERCENT

Fig. 5. A summary of characteristics of verbal responses made by Carl Rogers during the first six minutes of counseling interview with Gloria.

CUMULATIVE RECORD OF SELECTED CLIENT RESPONSES

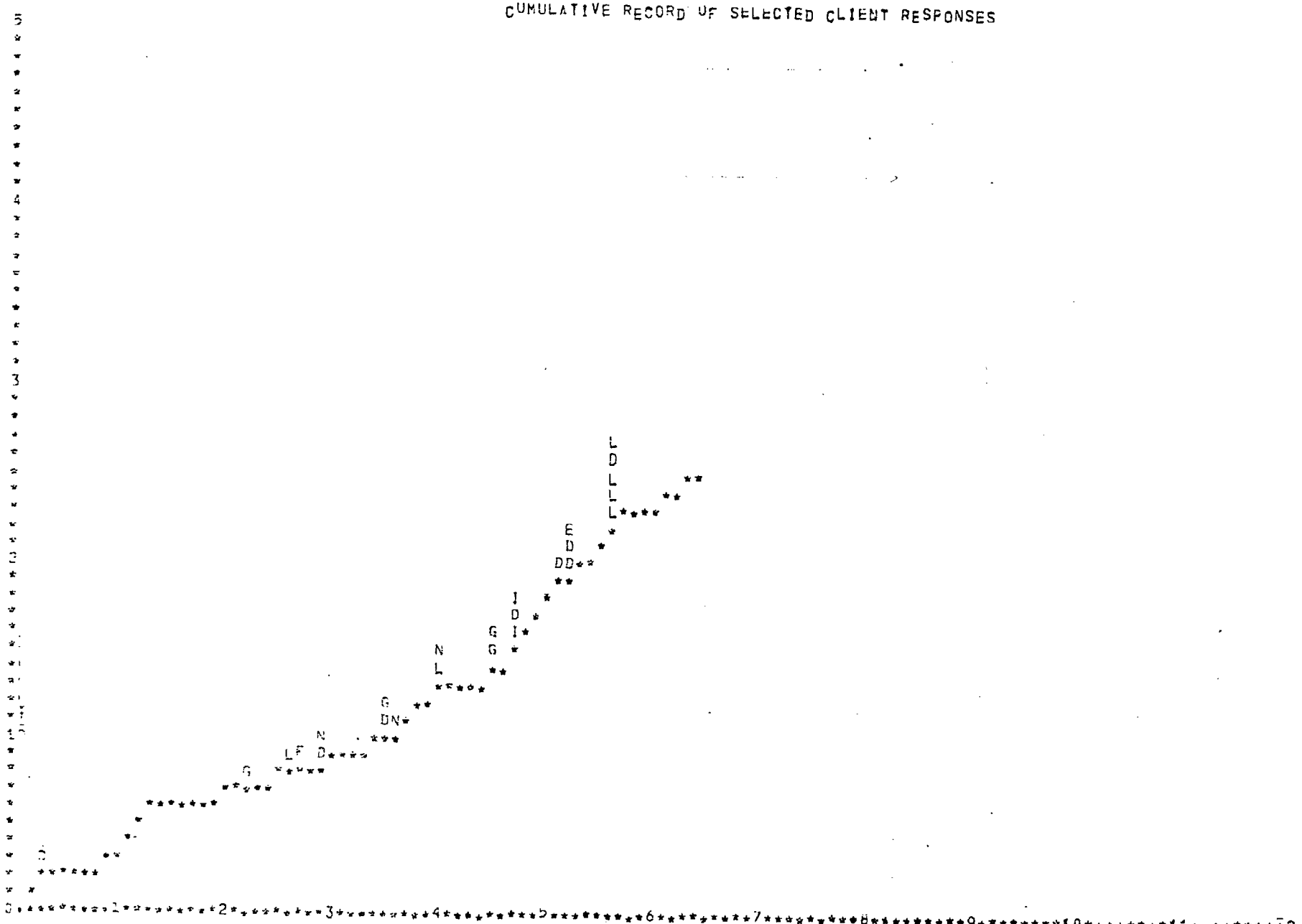

Fig. 9.

CLIENT RESPONSE CHARACTERISTICS
PERSON = FIRST
TENSE = PRESENT
MODE = AFFECT
VALENCE =
TOPIC =

ROGERS / GLORIA

SLOPE = 0.391

KEY TO COUNSELOR RESPONSES
A = MINIMUM SOCIAL STIMULUS
B = ACCENT
C = RESTATEMENT
D = REFLECTION - SIMPLE
E = REFLECTION - CONFRONTING
F = REFLECTION - CAUSATIVE
G = INFORMATIONAL
H = IMPERATIVE
I = PROBE - SIMPLE
J = PROBE - RHETORICAL
K = ABILITY POTENTIAL
L = SELF REFERENCE
M = JOINT IMPERATIVE
N = THIRD PERSON INFORMATION

An Illustrative Experiment. To demonstrate the effects of counselor verbal behavior on client verbal responses in the interview, an experimental interview was conducted and analyzed by SUBROUTINE SPOTTY. The experimental interview was divided into two six minute segments. During the first segment, which could be called the free operant segment, counselor responses were emitted at random time intervals. During the second segment, counselor responses were again scheduled at random time intervals but were also contingent upon the preceding client response meeting the criteria of a School Reference Response. During the entire experimental interview the counselor attempted to restrict his responses to Minimum Social Stimuli and Simple Reflections. The cumulative record of the free operant period of the experimental interview is illustrated in Figure 10 and the cumulative record of the conditioning segment is illustrated in Figure 11.

A comparison of two records reveals that during the free operant segment (Fig. 10) the rate of client acquisition of critical responses was 0.052 while during the conditioning period (Fig. 11) the acquisition rate manifest a marked increase to 0.492. Results of this simple experiment as illustrated in the two cumulative records provides dramatic evidence of the critical role of contingency management in counselor responding.

Using the options provided in Program DISCANAL such a graphic analysis is possible for any preselected class of client response units. Work sheets for preparing Program DISCANAL control cards are provided in Appendix D.

Evaluating Changes in Verbal Behavior

In addition to the sequence analysis provided by cumulative records, another approach to analyzing counselor effectiveness is to measure changes in the characteristics of client behavior between segments of a given interview or over the course of several interview sessions. PROGRAM CHANGE was developed to provide statistical data on 114 client verbal behavior variables during the initial segment of an interview and to compute changes in these statistics during subsequent segments. The program also computes the mean, maximum, minimum and range for each variable. In addition to the data provided for client verbal behavior, PROGRAM CHANGE provides a similar summary for each of 142 counselor verbal response variables. Input for PROGRAM CHANGE is provided by the punched output from PROGRAM DISCANAL. PROGRAM CHANGE is listed in Appendix A. Results of summary statistics for the Rogers, Perls and Ellis interviews with Gloria are presented in Appendix E.

Assessing Counselor Style

In addition to providing analyses of changes in counselor and client verbal response characteristics PROGRAM CHANGE produces punched card output which constitute computer program statements to delimit the range of each of the 142 counselor response variables. In other words, PROGRAM CHANGE, processes summaries for an interview or series of interviews and produces

CUMULATIVE RECORD OF SELECTED CLIENT RESPONSES

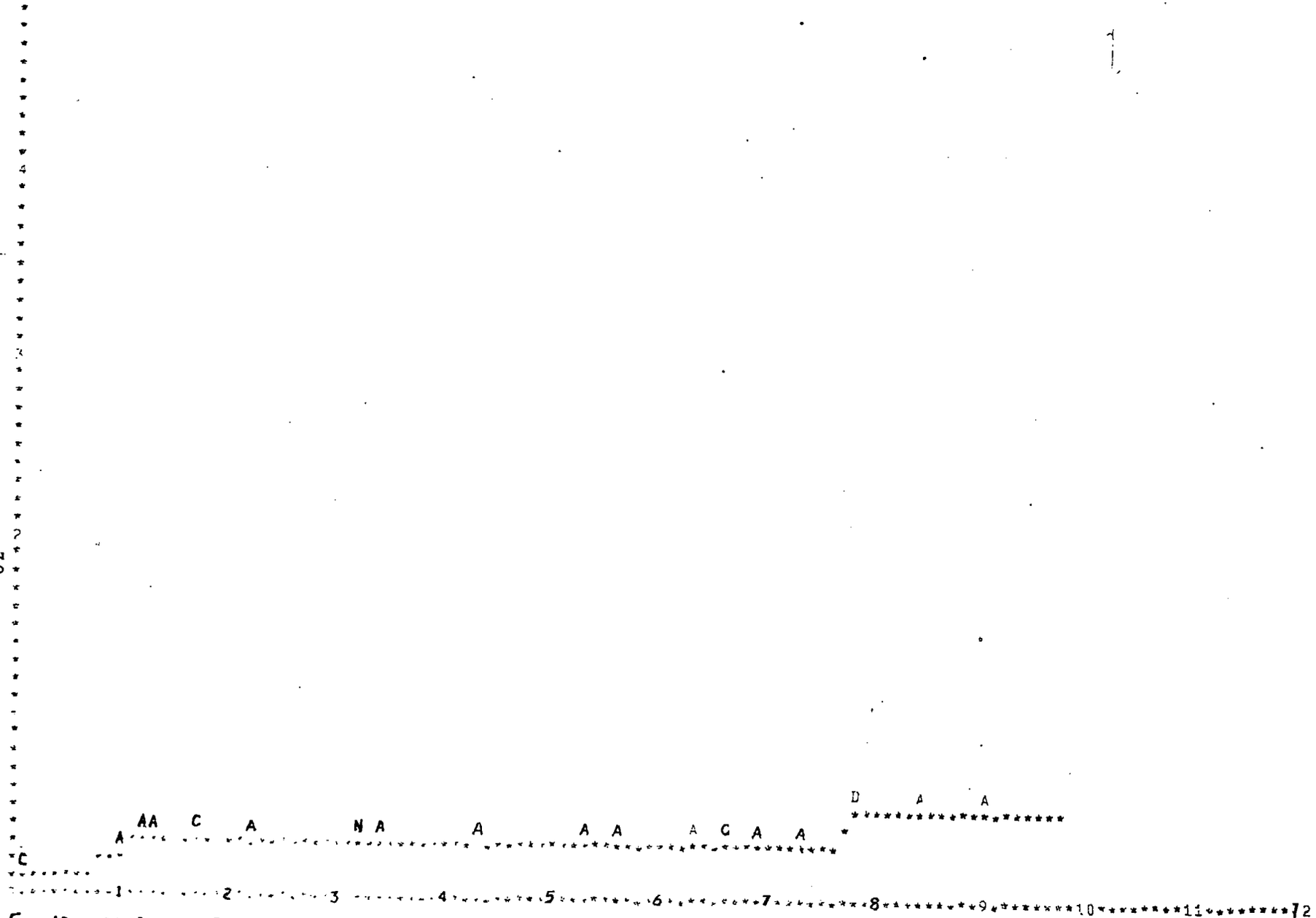

Fig. 10. CLIENT RESPONSE CHARACTERISTICS

PERSON =
TENSE =
MODE =
VALENCE =
TOPIC = SCHOOL

E / S

SLOPE - 0.052

KEY TO COUNSELOR RESPONSES

A = MINIMUM SOCIAL STIMULUS
B = ACCENT
C = RESTATEMENT
D = REFLECTION - SIMPLE
E = REFLECTION - CONFRONTING
F = REFLECTION - CAUSATIVE
G = INFORMATIONAL
H = IMPERATIVE
I = PROBE - SIMPLE
J = PROBE - RHETORICAL
K = ABILITY POTENTIAL
L = SELF REFERENCE
M = JOINT IMPERATIVE
N = THIRD PERSON INFORMATION

CUMULATIVE RECORD OF SELECTED CLIENT RESPONSES

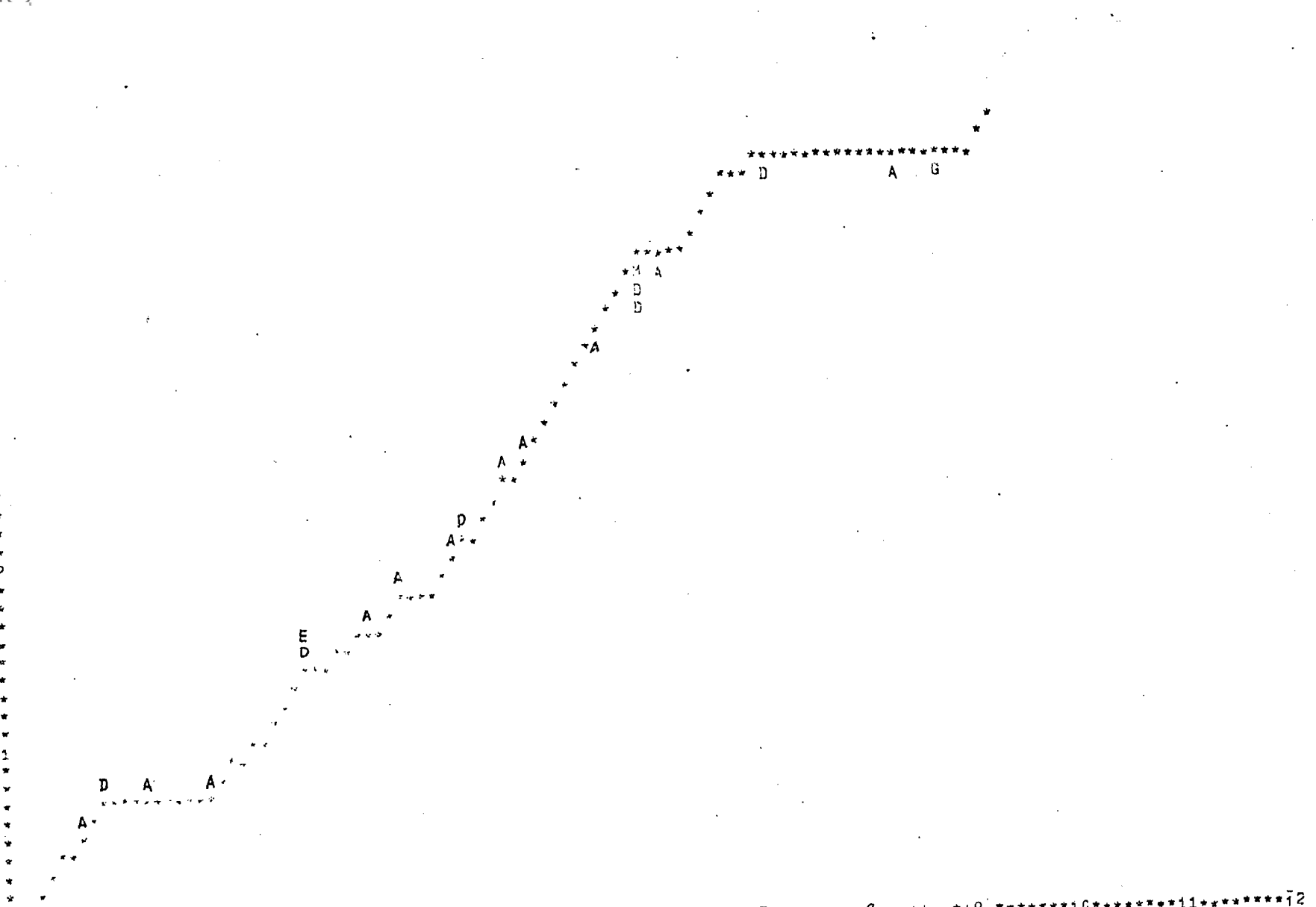

Fig. 11. CLIENT RESPONSE CHARACTERISTICS

PERSON =
TENSE =
MODE =
VALENCE =
TOPIC = SCHOOL

E / S

SLOPE = 0.492

KEY TO COUNSELOR RESPONSES

A = MINIMUM SOCIAL STIMULUS
B = ASSENT
C = RESTATEMENT
D = REFLECTION - SIMPLE
E = REFLECTION - CONFRONTING
F = REFLECTION - CAUSATIVE
G = INFORMATIONAL
H = IMPERATIVE
I = PROBE - SIMPLE
J = PROBE - RHETORICAL
K = ABILITY POTENTIAL
L = SELF REFERENCE
M = JOINT IMPERATIVE
N = THIRD PERSON INFORMATION

criterion limits for each of the 142 counselor response variables. Summaries from an interview of unknown style may then be checked against each of these criterion limits to assess the percent of agreement with a known counseling style. Any style may be used as the criterion.

Automated Assessment of Counselor Style. The first four segments of interviews by Rogers, Perls and Gloria were used as criterion performances for client centered, Gestalt and Rational Emotive counseling styles. A special computer program, PROGRAM STYLE, was designed to compare 71 selected counselor response variables against these three criterion performances. PROGRAM STYLE is listed in Appendix A. The accuracy of the program and its ability to discriminate style differences was checked by using it to assess the 12 criterion interview segments. Table 5 presents the results of this criterion assessment.

TABLE 5

AUTOMATED RATINGS OF CRITERION INTERVIEW SEGMENTS

Int. Seg.	Agreement with Client Centered Criteria	Agreement with Gestalt Criteria	Agreement with Rational Emotive Criteria
Rogers 1	100	56	72
Rogers 2	100	62	69
Rogers 3	100	69	73
Rogers 4	100	51	62
Perls 1	56	100	72
Perls 2	55	100	65
Perls 3	77	100	76
Perls 4	68	100	83
Ellis 1	59	61	100
Ellis 2	72	58	100
Ellis 3	62	70	100
Ellis 4	59	55	100

Note: Data represent percent of counselor response agreement with each of the criterion styles.

As was to be expected, each of the criterion interviews yield 100% agreement with its respective style. The extent of inter-counselor agreement, however, was somewhat higher than expected (eg. Perls interview segment 4 while yielding the expected 100% agreement with the Gestalt criteria also revealed 83% agreement with Rational Emotive criteria).

Cross Validation of Style Assessment. A final study was conducted to test the ability of PROGRAM STYLE in discrimination among eight six minute interview segments. The data base for this test consisted of segments from an experimental interview

and the fifth segments from the Rogers, Perls and Ellis interviews. The experimental interview was one in which the counselor provided Minimal Social Stimuli or Simple Reflections at random time intervals. The eight interview segments were analyzed by PROGRAM DISCANAL and the punched output constituted the input data for PROGRAM STYLE. Results of PROGRAM STYLE assessments of the counseling style used in each of the interview segments is provided in Table 6.

TABLE 6

RESULTS OF AUTOMATED COUNSELING STYLE ASSESSMENT

Int. Seg.	Client Centered		Gestalt		Rational Emotive	
	%	z	%	z	%	z
Exp. 1	52	-1.14	56	-0.40	51	-0.64
Exp. 2	58	-0.28	56	-0.40	65	0.27
Exp. 3	55	-0.71	56	-0.40	49	-1.18
Exp. 4	58	-0.28	55	-0.50	54	-0.72
Exp. 5	56	-0.57	59	-0.10	54	-0.72
Rogers 5	73	1.85	55	-0.50	73	0.81
Perls 5	66	0.85	83	2.30	68	0.54
Ellis 5	65	0.71	58	-0.20	80	1.63
Mean	60		60		62	
S D	7		10		11	

Inspection of Table 6 data reveals that in terms of percent agreement and z scores, PROGRAM STYLE correctly discriminated adherence to each of the criterion styles. At this point, however, it must be recognized that this is merely a demonstration exercise. A larger criterion data base and the expression of criterion limits in terms of standard deviations instead of ranges could be expected to sharpen the discrimination powers of the program.

CHAPTER IV

CONCLUSIONS AND RECOMMENDATIONS

Within the context of a continuing process of programmatic research (Zimmer & Park, 1967; Zimmer & Anderson, 1968; Pepyne, 1968; Kennedy & Zimmer, 1968; Hackney, 1969; Pepyne, Zimmer & Hackney, 1969; Zimmer, Wightman & MacArthur, 1970; Pepyne, 1970; Crowley, 1970; Pepyne, 1971; Hakstien, Zimmer & Newby, 1971; Zimmer & Pepyne, 1971; Zimmer & Cowles, 1972) this project has developed, evaluated and implemented methods and materials for the automated analysis of counselor and client verbal behavior in counseling interviews. The computer programs emanating from this project combine the methodological rigor of behavioral research with the broad applicability of classical content analysis procedures.

Conclusions

The general purposes of this project were achieved through the development, evaluation and implementation of a system of computer programs called the DISCOURSE ANALYSIS SYSTEM. The system consists of PROGRAM DISCANAL and its integrated subroutines, PROGRAM CHANGE AND PROGRAM STYLE. These components accept uncoded typescripts of counseling interviews as input and perform the following functions:

1. Divide counselor and client responses into independent clause units (93% agreement with human coders).

2. Classify response units into subcategories in accordance with person of the subject; tense of the verb; cognitive, affective or neutral mode of expression; valence of affect and preselected topics (86% overall agreement with human coders; 93% to 97% agreement within categories).

3. Tabulate parameter of each speakers contributions, including percent of words and clause units contributed; type/token ratios; average number of words per response unit; percent of words over two syllables, etc.

4. Tabulate a summary of counselor and client response units by person, tense, mode and valence.

5. Classify counselor response units into 14 empirically derived categories (89% agreement with human coders) and computes the number of words used in each type response.

6. Print a cumulative record of selected client response classes in relation to counselor response types.

7. Provide a process-outcome summary analysis relating counselor style to changing patterns of client responses.

8. Rate counselor verbal behavior in accordance with three selected counseling styles (Client-Centered; Gestalt; Rational Emotive).

The development, evaluation and trial applications of the DISCOURSE ANALYSIS SYSTEM has provided methods and materials for the content analysis of large bodies of interview data and has also provided a methodological approach for the combined application of content analysis and the experimental analysis of verbal behavior to further investigate the complexities of the counseling process. The present version of the DISCOURSE ANALYSIS SYSTEM is presented as a prototype model. The model, however, appears to be robust, flexible and amenable to refinements and expansion.

Recommendations

Like most research and development efforts, results of this project suggest that a vast number of additional activities and applications should be pursued.

Additional Activities. As noted in the description of the development of the system, a variety of program refinements and expansions are suggested:

1. SUBROUTINE CLAUSE could be further modified to more adequately deal with imbedded quotations, interrupted clauses, and extraneous lead and tag phrases.

2. SUBROUTINE COUNS could be refined to more accurately identify rhetorical questions and to more appropriately discriminate between self-references and reflections.

3. Additional dictionaries need to be developed to include such topics as job and career, courtship, sex and marriage, etc.

4. PROGRAM STYLE should be re-developed on a much broader criterion data base and refined statistical limits obtained in order to provide finer grained discriminations and assessments of counseling style.

5. The DISCOURSE ANALYSIS SYSTEM could be easily modified for applications to disciplines such as literature, drama, speech, foreign languages, political science, group processes, etc.

6. the DISCOURSE ANALYSIS SYSTEM could be converted from batch to interactive mode to facilitate user applications.

Recommended Research. In addition to additional R & D activities, the current version of the DISCOURSE ANALYSIS SYSTEM could be profitably employed to seek answers to such pressing counseling research questions as the following:

1. What client response characteristics, singly or in combination, correlate with client behavioral tendencies external to the counseling environment?

2. What changes in client response characteristics, taken singly or in combinations, vary with therapeutic behavioral change outside the counseling interview?

3. What characteristics of client verbal responses are related to counselor response types?

4. What characteristics of client verbal behavior are related to the timing (contingencies) of counselor responding?

5. What interactive effects of counselor timing and response type are observable in the characteristics of client verbal behavior?

6. What sampling procedures provide the optimum representation of counselor-client interactions within the total interview?

It is hoped that as researchers apply, refine, modify, or expand this system, they will share their results widely in an effort to continue the programmatic research effort of which this is a part.

As Marsden (1965) observed, "Few variables or notions about counseling interviews have received anything approaching programmatic or extensive content analysis investigation." What was needed was an unresentful drudge to perform reliably and efficiently the gargantuan clerical task involved. The DISCOURSE ANALYSIS SYSTEM fulfills this need.

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APPENDIX A

PROGRAM DISCANAL & SUBROUTINES

PROGRAM CHANGE

PROGRAM STYLE

THE AUTOMATED ANALYSIS OF COUNSELOR STYLE AND EFFECTS

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JANUARY 1973

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      PROGRAM DISCANAL
      EQUIVALENCE (ICON1,ICON2),(ICO,IIWORD),(ICLZ,ICLZ2)
      EQUIVALENCE (ISPKW,IKWD),(ITPW,ITPWD),(ICOGG,ICOG)
      DOUBLE PRECISION ICON1,IWORDA,ISPKW,ICLZ,ITPW,ICO,ICOGG,ISV
      COMMON /A/ ISIMBOL(30),ISELF(8),ICONJUN(11),IDO
      COMMON /6/ ICPAR,ICO,IIWORD,ICLZ(100),IKP,ICLZ2(2,100),KP,KNT(4)
      COMMON /8/ ITAPE,IREPT,IKEY,ISYMBL,IKEY2,IKEY3,K1,K2,KT(6)
      COMMON /9/ IMARK(2),INN(2),IPON(2),ITEST1(2),ITEST2(2),ITEST3(2),I
     1TOTAL(2),ICTN(2),NSWDS(2)
      COMMON/10/NLET(4),IPRO(3,4)
      COMMON/11/MIN(4),MAX(4),TWD(4)
      COMMON/12/ITTPC(7,4),ICMBN(4),ICG(4),IAFF(4),IPS(4),ING(4),
     1IPRS(3,4),ITNS(3,4),NEUT(4),MPN(4),MAC(4)
      COMMON/14/JKP,ISV(100),ICOUN(20)
      COMMON IFMT(10),NSTAT(4),NQUES(4),IPER(4),NEXC(4),ITWD(4)
      COMMON /C/ ICON1(4050),ICT(4050),ICON2(2,4050),ISPKW(200),IKWD(2,5
     100),ITPWD(2,1000),ITPW(1000),ICOG(2,200),ICOGG(200)
      COMMON /X/ JPR,JJPR,JTN,JJTN,JMODE,JJMODE,JVAL,JJVAL,JTP,JJTP,IX,
     1IY,JY,ITY,ISPOT(1200,50),IAPH(14),NLR(4),IBW(4),IW(20)
      COMMON /Z/ MAT1(3,3,8),MAT2(3,3,3)
      DIMENSION WORDS(4), IQU(2), IHDR(10), ITITL(10),RPRU(3),IIWORD(2),
     1RAT(3),RRAT(3),JTL(10),PRC(20),AW(20),PBW(4)
C     ****************************************************************
      DATA (IDO=1H$)
      DATA (ICONJUN=3HAND,3HBUT,2HOR,3HNOR,7HHOWEVER,2HAS,6HTHOUGH,2HIF,
     15HSINCE,7HBECAUSE,6HUNLESS)
      DATA (ISELF=1HI,2HME,2HIM,2HID,2HMY,3HIVE,6HMYSELF,5HILL)
      DATA (ISIMBOL=1H.,...X,1H$,1H*,1H!,1H=,1H',1H;,1H>,1H%,1H+,1H/)
C     ****************************************************************
      NRUN=0
      JSAM=0
C     READ NAMES OF SPEAKERS - BLANK CARD FOR CONCORDANCE OF TEXT
C     ****************************************************************
    5 READ 260, IPER
      IF(EOF,60)230,6
C     READ THE FORMAT OF DATA
C     ****************************************************************
    6 READ 270,IFMT
C     READ TITLE CARD FOR EACH PAGE OF OUTPUT
C     ****************************************************************
      READ 235, ITITL
C     READ HEADER CONTROL CARD - 1ST COL = CODE FOR TYPE OF ANALYSIS
C     ****************************************************************
C         REST OF CARD = TITLE
C         ITAPE    BLANK=SENTENCE ANALYSIS
C                  1=FREQUENCY COUNTS OF  WORDS
C                  2=INDIVIDUAL WORD ANALYSIS = KEY WORDS
C                  3=CONCORDANCE - FREQ. COUNTS AND PHRASES FROM TEXT
C                    WITHOUT SPEAKERS.  IF COL,20-22 OF NEXT CARD ARE
C                    BLANK, CONCORDANCE IS OF ALL WORDS,  IF NON-BLANK,
C                    CONCORDANCE IS OF ONLY THOSE KEYWORDS SPECIFEID.
C                  4=SYNOPSIS
C                  5=PARS THE WORDS .
C                  6=PARS ONLY NOUNS AND VERBS AND GET FREQUENCY COUNTS T
C                  7=INTERVIEW CONTENT ANALYSIS
C                  8=STYLE - TOUGH, SWEET, STUFFY
```

```
C  ***********************************************************************
   10 READ 275, ITAPE,IHDR
      IF (EOF,60)2300,15
   15 IF(ITAPE,NE,7)GO TO 11
      PRINT 4000
      PRINT 4001
      PRINT 4002
      PRINT 4003
      PRINT 4004
      PRINT 4005
      PRINT 4006
      PRINT 4007
      PRINT 4008
      PRINT 4009
      PRINT 4010
      PRINT 4011
      PRINT 4012
      PRINT 4013
      PRINT 4014
      PRINT 4015
      PRINT 4016
      PRINT 4017
      PRINT 4018
      PRINT 4019
      PRINT 4020
      GO TO 12
   11 PRINT 240
      PRINT 245
      PRINT 250
   12 PRINT 276,ITAPE,IHDR
      PRINT 265,IPER
  276 FORMAT (1H1,I1,9A8,A7)
C     INITIALIZE
C  ***********************************************************************
      DO 20 I=1000,4000,1000
   20 ICON1(I)=0
      NRUN=NRUN+1
      DO 25 J=1,4050
   25 ICT(J)=0
      DO 30 I=1,2
      NSWDS(I)=0
      IMARK(I)=1
      ITEST1(I)=0
      ITEST2(I)=0
      ITEST3(I)=0
      ITOTAL(I)=0
   30 IPON(I)=0
      INN(1)=0
      INN(2)=1200
      DO 35 K=1,4
      ITWD(K)=0
      MAX(K)=0
      MIN(K)=1000
      TWD(K)=0
      NEXC(K)=0
      NSTAT(K)=0
```

```
      NQUES(K)=0
      ICMBN(K)=0
      ICG(K)=0
      IAFF(K)=0
      IPS(K)=0
      ING(K)=0
      NEUT(K)=0
      MPN(K)=0
      MAC(K)=0
      NLR(K)=0
      IBW(K)=0
      PBW(K)=0,
      DO 36 I=1,3
      IPRS(I,K)=0
      ITNS(I,K)=0
      IPRO(I,K)=0
   36 CONTINUE
      DO 136 J=1,7
      ITTPC(J,K)=0
  136 CONTINUE
   35 CONTINUE
      DO 137 I=1,20
      ICOUN(I)=0
      PRC(I)=0,
      IW(I)=0
      AW(I)=0,
  137 CONTINUE
      DO 236 I=1,120
      DO 236 J=1,50
  236 ISPOT(I,J)=1H
      IX=0
      IY=0
      JY=0
      DO 2361 LI=1,3
      DO 2361 MI=1,3
      DO 2361 NI=1,8
      MAT1(LI,MI,NI)=0
      MAT2(LI,MI,NI)=0
 2361 CONTINUE
      IF (ITAPE.EQ.4) GO TO 190
      NPEOPLE=1
C  ***************************************************************
C      READ IN PROGRAM CONTROLS - CONTROL CARD 2
C  ***************************************************************
C      1      NPEOPLE      NO OF PEOPLE CONVERSING IN THIS DATA SAMPLE
C      2      IPR          1=PRINT INPUT TEXT; 0=DO NOT PRINT TEXT
C      3      ISYMBL       1=SYMBOLS ARE TO BE EXTRACTED FROM THIS CONVERS
C                          2=NOT EXTRACTED
C      4-6    IREPT        YES=REPEAT DATA FROM PREVIOUS DATA SAMPLE
C                          NO =NEW SET OF DATA
C      7      IPARENS      1=FORGET WHATS IN PARENTHESES
C                          2=INCLUDE THE WORD IN THE TABLE BUT NOT IN COUN
C                          3=INCLUDE THE WORD IN THE TABLE AND IN COUNTERS
C      9-10   NNN          NO OF PORTIONS FOR TEXT TO BE DIVIDED INTO
C     11-12   NCHAR        NO. OF CHARACTERS TO BE PICK UP ON A CARD(1-75)
C     13      ISQ          1=CALCULATE NUMBER OF SENTENCES AND QUESTIONS
```

```
C                              0=DO NOT CALCULATE NUMBER OF SENTENCES AND QUES
C      14      KEEP            1=KEEP KEY WORDS FROM PREVIOUS RUN(USE ONLY IF
C                              ITAPE=0)
C                              0=OTHERWISE
C      17-19   IKEY            NUMBER OF KEY WORDS FOR INDIVIDUAL WORD ANALYSIS
C                              (IF SENTENCE OR CLAUSE ANALYSIS IS USED,
C                              NUMBER OF NEGATIVE KEY WORDS)
C      20-22   IKEY2           FOR SENTENCEAND CLAUSE ANALYSIS ONLY - NUMBER
C                              OF POSITIVE KEY WORDS
C      23-25   IKEY3           FOR CLAUSE ANALYSIS, NUMBER OF COGNITIVE WORDS
C      26-28   IKEY4           FOR CLAUSE ANALYSIS ONLY, NUMBER OF KEY WORDS IN
C                              1ST TOPIC
C      29-31   IKEY5           2ND TOPIC
C      32-74   IKEY6           3RD TOPIC
C      35-37   IKEY7           4TH TOPIC
C      38-40   IKEY8           5TH TOPIC
C  ************************************************************************
C  ************************************************************************
      READ 280, NPEOPLE,IPR,ISYMBL,IREPT,IPARENS,ISEL,NNN,NCHAR,ISQ,
     1KEEP,IKEY,IKEY2,IKEY3,IKEY4,IKEY5,IKEY6,IKEY7,IKEY8,ITHR,IPUN
      PRINT 281,NPEOPLE,IPR,ISYMBL,IREPT,IPARENS,ISEL,NNN,NCHAR,ISQ,
     1KEEP,IKEY,IKEY2,IKEY3,IKEY4,IKEY5,IKEY6,IKEY7,IKEY8
281   FORMAT (1X,3I2,A3,6I2,2X,8I3)
      IF(ITAPE.EQ.7)READ 270,JJPR,JJTN,JJMOVE,JJVAL,JJTP
      IF (KEEP.EQ.1)GO TO 32
C  READ NEGATIVE AFFECT WORDS
C  ************************************************************************
      IF (IKEY.EQ.0)GO TO 33
      READ 235,JTL
      PRINT 186,JTL
      READ 270,(IKWD(1,I),IKWD(2,I),I=1,IKEY)
      PRINT 277,(IKWD(1,I),IKWD(2,I),I=1,IKEY)
      K1=IKEY+1
      K2=IKEY+IKEY2
C  READ POSITIVE AFFECT WORDS
C  ************************************************************************
      IF (ITAPE.NE.0.AND.ITAPE.NE.7)GO TO 33
      READ 235,JTL
      PRINT 186,JTL
      READ 270,(IKWD(1,I),IKWD(2,I),I=K1,K2)
      PRINT 277,(IKWD(1,I),IKWD(2,I),I=K1,K2)
      IF (ITAPE.NE.7)GO TO 33
C  READ COGNITIVE WORDS
C  ************************************************************************
      READ 235,JTL
      PRINT 186,JTL
      READ 270,(ICOG(1,I),ICOG(2,I),I=1,IKEY3)
      PRINT 277,(ICOG(1,I),ICOG(2,I),I=1,IKEY3)
      KT(1)=IKEY4
      KT(2)=KT(1)+IKEY5
      KT(3)=KT(2)+IKEY6
      KT(4)=KT(3)+IKEY7
      KT(5)=KT(4)+IKEY8
C  READ TOPIC 1 WORDS
C  ************************************************************************
      IF (IKEY4.EQ.0)GO TO 33
```

```
      READ 235,JTL
      PRINT 186,JTL
      READ  270,(ITPWD(1,I),ITPWD(2,I),I=1,IKEY4)
      PRINT 277,(ITPWD(1,I),ITPWD(2,I),I=1,IKEY4)
      DO 21 I=2,5
      IF (KT(I).EQ.KT(I-1))GO TO 33
      KTT1=KT(I-1)+1
      KTT2=KT(I)
C  READ TOPICS 2-5 WORDS
C  ***************************************************************
      READ 235,JTL
      PRINT 186,JTL
      READ  270,(ITPWD(1,J),ITPWD(2,J),J=KTT1,KTT2)
      PRINT 277,(ITPWD(1,J),ITPWD(2,J),J=KTT1,KTT2)
277   FORMAT (/(5(1X,2A8)))
21    CONTINUE
      GO TO 33
32    IF (IKEY.NE.0)GO TO 33
      PRINT 34
34    FORMAT (* NEED NUMBER OF KEY WORDS EVEN WHEN KEY WORDS ARE USED FR
     1OM PREVIOUS RUN*)
      STOP
33    PRINT 186,ITITL
      PRINT 285,IHDR
C     CALL SUBROUTINE TO READ AND HANDLE THE DATA
C  ***************************************************************
      CALL READIN (ISEL,NCHAR,LAST,IPR,IPARENS,KK,NPEOPLE)
      REWIND 20
      IF (ITAPE.EQ.5)GO TO 10
C     LOOP FOR EACH PERSONS WORDS
C  ***************************************************************
      DO 185 K=1,NPEOPLE
      IF (ITAPE.EQ.0) GO TO 64
      ISUM=0
C     N= POSITION OF PERSONS 1ST WORD IN ARRAY
C  ***************************************************************
      N=K*1000-999
C     M= POSITION OF PERSONS LAST WORD IN ARRAY
C  ***************************************************************
      M=ICON1(N+999)+N-1
      IF (NPEOPLE.EQ.1) M=ICON1(4000)
C  COUNSELING INTERVIEW ANALYSIS JUMPS AHEAD TO PRINT
C  ***************************************************************
      IF (ITAPE.EQ.7)GO TO 181
      IF (ITAPE.EQ.8)GO TO 226
      IF (IKEY.GT.0) GO TO 50
      MM=M-1
C     SORT FOR PRELIMINARY ALPHABETICAL LIST
      DO 45 I=N,MM
      DO 45 J=I,MM
      IF (ICON1(I)-ICON1(J+1)) 45,45,40
40    IWORDA=ICON1(J+1)
      ICON1(J+1)=ICON1(I)
      ICON1(I)=IWORDA
      IWORD=ICT(J+1)
      ICT(J+1)=ICT(I)
```

```
      ICT(I)=IWORD
   45 CONTINUE
   50 PRINT 285, ITITL
      PRINT 285, IHDR
      IF (NPEOPLE.EQ.1) PRINT 290
      IF (NPEOPLE.GT.1) PRINT 295, IPER(K)
      IF (IKEY.GT.0.AND.ITAPE.NE.3) GO TO 55
C     CALL SUBROUTINE FOR COMPLETING THE ALPHABETIZING OF THE LIST AND
C        PRINTING IT
      CALL ALF (N,M,K)
      LAST=K*2-1
      GO TO 165
C     REACH HERE WHEN HAVE KEYWORDS
   55 DO 60 JK=N,M
C     PRINT WORDS AND FREQUENCIES
   60 PRINT 300, ICON2(1,JK),ICON2(2,J    CT(JK)
      GO TO 165
C     PRINT OUT FOR SENTENCE ANALYSIS
64    PRINT 186,ITITL
186   FORMAT (1H1,10A8//)
      PRINT 285,IHDR
   65 PRINT 305, IPER(K)
      GO TO (70,75), K
C     M IS POSITION OF LAST WORD IN ARRAY OF SENTENCE WORDS FOR EACH PER
   70 M=ICON2(1,1200)
      IKK=0
      GO TO 80
   75 M=ICON2(1,4050)
      IKK=1200
C     N IS TOTAL NUMBER OF SENTENCES FOR SENT ANALYSIS
   80 N=(M-IKK)/10+1
      DO 85 I=1,N
      IK1=IKK+(I-1)*10+1
      IK2=IK1+ICT(IK1+2)
C     PRINT EACH SENTENCE
   85 PRINT 310, ICT(IK1),((ICON2(1,J),ICON2(2,J)),J=IK1,IK2)
      TOTAL=ITOTAL(K)
      TEST1=ITEST1(K)
      TEST2=ITEST2(K)
      TEST3=ITEST3(K)
      RATIO1=TEST1/TOTAL
      RATIO2=TEST2/TOTAL
      RATIO3=TEST3/TOTAL
C     PRINT NUMBER OF TYPES OF SENTENCES AND RATIOS OF EACH TYPE TO TOTA
      PRINT 186,ITITL
      PRINT 285,IHDR
      PRINT 315, ITEST1(K),ITOTAL(K)
      PRINT 320, RATIO1
      PRINT 325, ITEST2(K),ITOTAL(K)
      PRINT 330, RATIO2
      PRINT 335, ITEST3(K),ITOTAL(K)
      PRINT 340, RATIO3
C     DIVIDE TEXT INTO SECTIONS FOR EACH PERSON
      IQUART=ITOTAL(K)/NNN
      NNA=NNN+1
      DO 90 JK=1,NNA
```

```
   90 IQU(JK)=JK*IQUART
      IQU(NNN)=ITOTAL(K)
      IBEN=IKK*1
      IFIN=ICTN(K)
C     LOOP FOR EACH SECTION OF TEXT
      DO 140 IOP=1,NNN
      DO 95 JJ=IBEN,IFIN,10
      IF (ICT(JJ)-IQU(IOP)) 95,100,105
   95 CONTINUE
      IB1=IBEN*1
      IF1=IFIN*1
      GO TO 115
C     INTEGER OF 1ST WORD IN LAST SENTENCE OF EACH SECTION
  100 IQM=JJ
      GO TO 110
  105 IQM=JJ-10
  110 IB1=IBEN*1
      IF1=IQM*1
  115 MT1=0
      MT2=0
      MT3=0
C     FIND TYPE OF KEY WORDS IN EACH SENT IN SENT ANALYSIS
      DO 135 II=IB1,IF1,10
      GO TO (120,125,130,135), ICT(II)
C     SUM UP NUMBER OF SENTENCES OF EACH TYPE
  120 MT1=MT1+1
      GO TO 135
  125 MT2=MT2+1
      GO TO 135
  130 MT3=MT3+1
  135 CONTINUE
      IF (IOP.EQ.NNN) IQUART=ITOTAL(K)-IQUART*NNA
      QU=IQUART
      QRA1=MT1
      QRA2=MT2
      QRA3=MT3
      QRA1=QRA1/QU
      QRA2=QRA2/QU
      QRA3=QRA3/QU
      PRINT 345
      PRINT 345
      PRINT 350, IOP
      PRINT 355, MT1,IQUART,QRA1
      PRINT 360, MT2,IQUART,QRA2
      PRINT 365, MT3,IQUART,QRA3
      IBEN=IQM+10
  140 CONTINUE
      PRINT 141,NSWDS(K)
  141 FORMAT (///* TOTAL WORDS IN ENTIRE SESSION= *,I5)
C     END LOOP FOR EACH SECTION OF TEXT
      GO TO 185
  145 PRINT 370
      PRINT 415
      GO TO 185
  150 IF (WORDS(K).EQ.0.) GO TO 145
      BUM=ISUM
```

```
      IWD=WORDS(K)
      PRINT 375, ISUM,IWD
      CUM=BUM/WORDS(K)
      PRINT 380, CUM
C     WRITE UNIT 9 FOR SYNOPSIS DATA
  155 WRITE (9,385) (IHDR(III),III=1,2),ITAKE,ISUM,M,SUM,CUM,K
      IF (ISQ.EQ.0.OR.ITAPE.EQ.2) GO TO 160
C     COMPUTE AND PRINT TOTAL NUMBER OF SENTENCES AND RATIOS STATE/SEN
C        AND QUES/SEN
      NTOT=NSTAT(K)+NQUES(K)
      RSS=FLOATF(NSTAT(K))/FLOATF(NTOT)
      RQS=FLOATF(NQUES(K))/FLOATF(NTOT)
      RES=FLOATF(NEXC(K))/FLOATF(NTOT)
      PRINT 390, NTOT
      WRITE (6,395)NSTAT(K),NQUES(K),NEXC(K)
      WRITE (6,405)RSS,RQS,RES
  160 PRINT 415
      GO TO 185
C     REACH HERE AFTER PRINTING OUT WORDS AND FREQUENCIES
C     SUM UP TOTAL WORDS USED BY EACH PERSON
  165 DO 170 J=N,M
  170 ISUM=ISUM+ICT(J)
C     XM IS TOTAL DIFFERENT WORDS USED
      XM=M-N+1
      M=XM
      SUM=ISUM
      IF (IKEY.EQ.0) WORDS(K)=SUM
      SUM=XM/SUM
      IF (NPEOPLE.EQ.1) GO TO 180
      PRINT 420, ISUM,M,IPER(K)
      PRINT 430, SUM,IPER(K)
  175 IF (IKEY.GT.0) GO TO 150
      CUM=1.
      GO TO 155
  180 PRINT 425, ISUM,M
      PRINT 435, SUM
      GO TO 175
C  PRINT SUMMARIES FOR CLAUSE ANALYSIS
C  ***********************************************************************
181   PRINT 415
      PRINT 285,ITITL
      PRINT 285,IHDR
      IF (NPEOPLE.GT.1)PRINT 182,IPER(K)
182   FORMAT (//* ANALYSIS FOR *,A8/)
      IXM=M-N+1
      TTR=FLOATF(IXM)/FLOATF(ITWD(K))
      AV=FLOATF(ITWD(K))/FLOATF(KNT(K))
      PRINT 183,KNT(K),AV,MIN(K),MAX(K)
183   FORMAT (* TOTAL CLAUSES=*,I5/* AVERAGE CLAUSE LENGTH=*,F6.2/
     1* SHORTEST CLAUSE=*,I5,* WORDS*/* LONGEST CLAUSE=*,I5,* WORDS*/)
      MKNT=KNT(1)+KNT(2)
      PRINT 9030,MKNT
 9030 FORMAT (* TOTAL CLAUSES IN THIS SEGMENT = *,I3)
      AKNT=(FLOATF(KNT(K))/FLOATF(MKNT))*100.
      PRINT 9031,AKNT
 9031 FORMAT (* PERCENT OF CLAUSES CONTRIBUTED = *,F4.0)
```

```
      ANLR=FLOATF(NLR(K))/FLOATF(ITWD(K))
      PRINT 184,ITWD(K),IXM,TTR,ANLR
  184 FORMAT (/* TOTAL WORDS=*,I5/* NO. DIFFERENT WORDS=*,I5/
     1* TYPE/TOKEN RATIO=*,F5.2/* AVE. WORD LENGTH = *,F5.2/)
      MTWD=ITWD(1)*ITWD(2)
      PRINT 9032,MTWD
 9032 FORMAT (* TOTAL WORDS IN THIS SEGMENT = *,I4 )
      ATWD=(FLOATF(ITWD(K))/FLOATF(MTWD))*100.
      PRINT 9033, ATWD
 9033 FORMAT (* PERCENT OF WORDS CONTRIBUTED = *,F4.0)
      PBW(K)=(FLOATF(IBW(K))/FLOATF(ITWD(K)))*100.
      PRINT 9066,PBW(K)
 9066 FORMAT(* PERCENT OF WORDS OVER 5 LETTERS = *,F3.0/)
      ANT=KNT(K)
      DO 197 I=1,3
      RAT(I)=(FLOATF(IPRS(I,K))/ANT)*100.
  197 RRAT(I)=(FLOATF(ITNS(I,K))/ANT)*100.
      PRINT 9000
 9000 FORMAT (* PERSON OF SUBJECT */)
      PRINT9001,(I,IPRS(I,K),RAT(I),I=1,3)
 9001 FORMAT (* PERSON*,I2,1X,15(1H.),I3,1X,9(1H.),F4.0,* PERCENT*)
      PRINT 9002
 9002 FORMAT (/* TENSE OF VERB */)
      PRINT 9003,ITNS(1,K),RRAT(1)
 9003 FORMAT (* PAST *,19(1H.),I3,1X,9(1H.),F4.0,* PERCENT*)
      PRINT 9004,ITNS(2,K),RRAT(2)
 9004 FORMAT (* PRESENT *,16(1H.),I3,1X,9(1H.),F4.0,* PERCENT*)
      PRINT 9005,ITNS(3,K),RRAT(3)
 9005 FORMAT (* FUTURE *,17(1H.),I3,1X,9(1H.),F4.0,* PERCENT*)
      PRINT 9006
 9006 FORMAT (/* MODE */)
      CG=FLOATF(ICG(K))/ANT
      CG=CG*100.
      EUT=(FLOATF(NEUT(K))/ANT)*100.
      PRINT 9007,NEUT(K),EUT
 9007 FORMAT (* NEUTRAL *,16(1H.),I3,1X,9(1H.),F4.0,* PERCENT*)
      PRINT 9008,ICG(K),CG
 9008 FORMAT (* COGNITIVE *,14(1H.),I3,1X,9(1H.),F4.0,* PERCENT*)
      AFF=FLOATF(IAFF(K))/ANT
      AFF=AFF*100.
      PRINT 9009,IAFF(K),AFF
 9009 FORMAT (* AFFECTIVE *,14(1H.),I3,1X,9(1H.),F4.0,* PERCENT*)
      PMAC=(FLOATF(MAC(K))/ANT)*100.
      PRINT 906,MAC(K),PMAC
  906 FORMAT (* MIXED *,18(1H.),I3,1X,9(1H.),F4.0,* PERCENT*)
      PRINT 9010
 9010 FORMAT (/* VALENCE OF AFFECT */)
      PIPS=(FLOATF(IPS(K))/ANT)*100.
      PRINT 9011,IPS(K),PIPS
 9011 FORMAT (* POSITIVE *,15(1H.),I3,1X,9(1H.),F4.0,* PERCENT*)
      PING=(FLOATF(ING(K))/ANT)*100.
      PRINT 9012,ING(K),PING
 9012 FORMAT (* NEGATIVE *,15(1H.),I3,1X,9(1H.),F4.0,* PERCENT*)
      PMPN=(FLOATF(MPN(K))/ANT)*100.
      PRINT 906, MPN(K),PMPN
      PRINT 9013
```

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 9013 FORMAT(/* TOPIC */)
      PIT1=(FLOATF(ITTPC(1,K))/ANT)*100.
      PRINT 9014,ITTPC(1,K),PIT1
 9014 FORMAT (* SCHOOL REFERENCES *,6(1H,),I3,1X,9(1H,),F4.0,* PERCE    )
      PIT2=(FLOATF(ITTPC(2,K))/ANT)*100.
      PRINT 9015,ITTPC(2,K),PIT2
 9015 FORMAT (* FAMILY REFERENCES *,6(1H,),I3,1X,9(1H,),F4.0,* PERCENT*)
      PIT3=(FLOATF(ICMBN(K))/ANT)*100.
      PRINT 9016,ICMBN(K),PIT3
 9016 FORMAT (* COMBINATION *,12(1H,),I3,1X,9(1H,),F4.0,* PERCENT*)
      IF(IPUN.NE.1)GO TO 1984
      PUNCH 270, IHDR
      PUNCH 1970, IPER(K),AV,AKNT,TTR,ANLR,ATWD,PBW(K),RAT(1),RAT(2),RAT
     1(3),RRAT(1),RRAT(2),RRAT(3),EUT,CG,AFH,PMAC,PIPS,PING,PMPN,PIT1,PI
     2T2,PIT3
 1970 FORMAT(1H,A8,F5.2,F2.0,F4.2,F5.2,18F2.0)
 1984 IF(K.EQ.2)CALL SUMMARY(MAT2,IPER,K,IHDR,IPUN)
      IF (K.EQ.2)GO TO 185
      PRINT 9051,IPER(K)
 9051 FORMAT (1H1,////,* RESPONSE TYPE SUMMARY FOR *,A8/)
      DO 9050 KK=1,14
      PRC(KK)=(FLOATF(ICOUN(KK))/ANT)*100.
      AW(KK)=FLOATF(IW(KK))/FLOATF(ICOUN(KK))
 9050 CONTINUE
      IF(IPUN.NE.1)GO TO 1985
      PUNCH 1971,    IPER(K),(PRC(I),I=1,14)
 1971 FORMAT(1H5,A8,14F2.0)
      PUNCH 1972,    IPER(K),(AW(I),I=1,14)
 1972 FORMAT(1H6,A8,14F5.2)
 1985 PRINT 9052,ICOUN(1),PRC(1),AW(1)
 9052 FORMAT (* MINIMUM SOCIAL STIMULI .....* *,I3,* ..... *,F4.0,*
     1 PERCENT *,10(1H,),1X,F5.2,* WORDS PER RESPONSE*)
      PRINT 9053,ICOUN(2),PRC(2),AW(2)
 9053 FORMAT (* ACCENT ..................* *,I3,* ..... *,F4.0,*
     1 PERCENT *,10(1H,),1X,F5.2,* WORDS PER RESPONSE*)
      PRINT 9054,ICOUN(3),PRC(3),AW(3)
 9054 FORMAT (* RESTATEMENT .............* *,I3,* ..... *,F4.0,*
     1 PERCENT *,10(1H,),1X,F5.2,* WORDS PER RESPONSE*)
      PRINT 9055,ICOUN(4),PRC(4),AW(4)
 9055 FORMAT (* REFLECTION - SIMPLE .....* *,I3,* ..... *,F4.0,*
     1 PERCENT *,10(1H,),1X,F5.2,* WORDS PER RESPONSE*)
      PRINT 9056,ICOUN(5),PRC(5),AW(5)
 9056 FORMAT (* REFLECTION - CONFRONTING ...* *,I3,* ..... *,F4.0,*
     1 PERCENT *,10(1H,),1X,F5.2,* WORDS PER RESPONSE*)
      PRINT 9057,ICOUN(6),PRC(6),AW(6)
 9057 FORMAT (* REFLECTION - CAUSATION .....* *,I3,* ..... *,F4.0,*
     1 PERCENT *,10(1H,),1X,F5.2,* WORDS PER RESPONSE*)
      PRINT 9058,ICOUN(7),PRC(7),AW(7)
 9058 FORMAT (* INFORMATIONAL ..........* *,I3,* ..... *,F4.0,*
     1 PERCENT *,10(1H,),1X,F5.2,* WORDS PER RESPONSE*)
      PRINT 9059,ICOUN(8),PRC(8),AW(8)
 9059 FORMAT (* IMPERATIVE ..............* *,I3,* ..... *,F4.0,*
     1 PERCENT *,10(1H,),1X,F5.2,* WORDS PER RESPONSE*)
      PRINT 9060,ICOUN(9),PRC(9),AW(9)
 9060 FORMAT (* PROBE - SIMPLE ..........* *,I3,* ..... *,F4.0,*
     1 PERCENT *,10(1H,),1X,F5.2,* WORDS PER RESPONSE*)
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      PRINT 9061,ICOUN(10),PRC(10),AW(10)
 9061 FORMAT (* PROBE - RHETORICAL .........* *,I3,* ..........* *,F4.0,*
     1 PERCENT *,10(1H.),1X,F5.2,* WORDS PER RESPONSE*)
      PRINT 9062,ICOUN(11),PRC(11),AW(11)
 9062 FORMAT (* ABILITY POTENTIAL .........* *,I3,* ..........* *,F4.0,*
     1 PERCENT *,10(1H.),1X,F5.2,* WORDS PER RESPONSE*)
      PRINT 9063,ICOUN(12),PRC(12),AW(12)
 9063 FORMAT (* SELF REFERENCE ............* *,I3,* ..........* *,F4.0,*
     1 PERCENT *,10(1H.),1X,F5.2,* WORDS PER RESPONSE*)
      PRINT 9064,ICOUN(13),PRC(13),AW(13)
 9064 FORMAT (* JOINT IMPERATIVE ..........* *,I3,* ..........* *,F4.0,*
     1 PERCENT *,10(1H.),1X,F5.2,* WORDS PER RESPONSE*)
      PRINT 9065,ICOUN(14),PRC(14),AW(14)
 9065 FORMAT(* THIRD PERSON INFORMATION ... * *,I3,* ..........* *,F4.0,*
     1 PERCENT *,10(1H.),1X,F5.2,* WORDS PER RESPONSE*)
      PRINT 9017
 9017 FORMAT (1H1,46X,*CUMULATIVE RECORD OF SELECTED CLIENT RESPONSES*)
      DO 600 J=1,50
      JJ=50-J+1
      IF(XMODF(JJ,10),EQ.0)GO TO 601
      PRINT 9018,(ISPOT(I,JJ),I=1,120)
 9018 FORMAT (2H *,120A1)
      GO TO 600
  601 NM=JJ/10
      PRINT 9019,NM,(ISPOT(I,JJ),I=1,120)
 9019 FORMAT (1X,I1,120A1)
  600 CONTINUE
      PRINT 9020
 9020 FORMAT(1X,*0*,9(1H*),*1*,9(1H*),*2*,9(1H*),*3*,9(1H*),*4*,9(1H*),
     1*5*,9(1H*),*6*,9(1H*),*7*,9(1H*),*8*,9(1H*),*9*,8(1H*),*10*,8(1H*)
     2,*11*,8(1H*),*12*)
      PRINT 9021
 9021 FORMAT (/10X,*CLIENT RESPONSE CHARACTERISTICS*,20X,*KEY TO COUNSEL
     1OR RESPONSES*)
      PRINT 7001,JJPR
      PRINT 7002,JJTN
      PRINT 7003,JJMODE
      PRINT 7004,JJVAL
      PRINT 7005,JJTP
      PRINT 7006
      PRINT 7007, IPER(1),IPER(2)
      PRINT 7008
      SLP=FLOATF(IY)/FLOATF(IX)
      PRINT 7009,SLP
 7001 FORMAT(15X,*PERSON  = *,A8,29X,*A = MINIMUM SOCIAL STIMULUS   F =
     1REFLECTION - CAUSATIVE*)
 7002 FORMAT(15X,*TENSE   = *,A8,29X,*B = ACCENT*,20X,*G = INFORMATIONAL
     1*)
 7003 FORMAT(15X,*MODE    = *,A8,29X,*C = RESTATEMENT*,15X,*H = IMPERATI
     1VE*)
 7004 FORMAT(15X,*VALENCE = *,A8,29X,*D = REFLECTION - SIMPLE*,7X,*I = P
     1ROBE - SIMPLE*)
 7005 FORMAT(15X,*TOPIC   = *,A8,29X,*E = REFLECTION - CONFRONTING  J =
     1PROBE - RHETORICAL*)
 7006 FORMAT(76X,*K = ABILITY POTENTIAL*)
 7007 FORMAT(15X,A8,* / *,A8,42X,*L = SELF REFERENCE*)
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 7008 FORMAT(76X,*M = JOINT IMPERATIVE*)
 7009 FORMAT(15X,*SLOPE = *,F5.3,48X,*N = THIRD PERSON INFORMATION*)
 4000 FORMAT(1H1//////36X,*THE AUTOMATED ANALYSIS OF COUNSELOR STYLE AND
     1 EFFECTS*////)
 4001 FORMAT(38X,*PRINCIPAL INVESTIGATOR = DR, EDWARD W, PEPYNE*)
 4002 FORMAT(63X,*COLLEGE OF EDUCATION*,
 4003 FORMAT(63X,*UNIVERSITY OF HARTFORD*/)
 4004 FORMAT(38X,*RESEARCH ASSOCIATES    = MS, KATHLEEN H, COWLES*)
 4005 FORMAT(63X,*RESEARCH COMPUTING CENTER*)
 4006 FORMAT(63X,*UNIVERSITY OF MASSACHUSETTS*/)
 4007 FORMAT(63X,*MS, CAROL J, PEPYNE*)
 4008 FORMAT(63X,*COLLEGE OF EDUCATION*)
 4009 FORMAT(63X,*UNIVERSITY OF HARTFORD*/)
 4010 FORMAT(38X,*PROGRAMMING  ASSISTANT = MS, KATHERINE PAKANYA*)
 4011 FORMAT(63X,*RESEARCH COMPUTING CENTER*)
 4012 FORMAT(63X,*UNIVERSITY OF MASSACHUSETTS*///)
 4013 FORMAT(26X,*DEVELOPED AT THE RESEARCH COMPUTING CENTER OF THE UNIV
     1ERSITY OF MASSACHUSETTS*)
 4014 FORMAT(29X,*SUPPORTED IN PART BY THE USOE, DEPT, OF HEALTH, EDUCAT
     1ION, AND WELFARE*/)
 4015 FORMAT(55X,*PROJECT NO, 1-A-067*)
 4016 FORMAT(55X,*GRANT NO, OEG-1-72-0005(509)*)
 4017 FORMAT(55X,*OE-001422 NO, NIH 473622*)
 4018 FORMAT(/////5X,*ACKNOWLEDGEMENT IS HEREBY GRANTED TO EARLIER CONTE
     1NT ANALYSIS PROGRAMS GUIDED BY DR, JAMES M, ZIMMER, SCHOOL OF EDUC
     1ATION,*)
 4019 FORMAT(7X,*UNIVERSITY OF CALIFORNIA AT SANTA BARBARA, WHICH HAVE F
     1ACILITATED THE DEVELOPMENT AND IMPLIMENTATION OF THIS PROGRAM,*)
 4020 FORMAT(/////59X,*JANUARY 1973*)
      IF(K,EQ,1)CALL SUMMARY(MAT1,IPER,K,IHDR,IFUN)
  185 CONTINUE
C     END OF PRINTING LOOP FOR EACH PERSON
      IF(ITHP,EQ,3HDIF)GO TO 5
      GO TO 10
C  COUNSELING INTERVIEW ANALYSIS LOOP ENDS HERE
C  ********************************************************************
C  ********************************************************************
C     REACH HERE FOR SYNOPSIS
190   PRINT 186,ITITL
      PRINT 285,IHDR
      KUNIT=LAST-(2*NPEOPLE-2)
C     READ AND PRINT SUMMARIES FOR EACH PERSON
      DO 225 K=1,NPEOPLE
      REWIND 9
      PRINT 415
      PRINT 285, ITITL
      PRINT 285, IHDR
      PRINT 440, IPER(K)
      PRINT 445
  195 READ (9,385) IHD,JHD,ITAPE,ISUM,M,SUM,CUM,JPERS
      IF (EOF,9) 205,200
  200 IF (JPERS,EQ,K) PRINT 385, IHD,JHD,ITAPE,ISUM,M,SUM,CUM
      GO TO 195
  205 REWIND 9
      PRINT 450, IPER(K)
  210 READ (KUNIT) ICON1(1),ICNT,ITG
```

```
      IF (EOF,KUNIT) 220,215
C     PRINT OUT RESIDUAL WORD LIST
  215 IF (ITG,GT,0) GO TO 210
      PRINT 300, ICON2(1,1),ICON2(2,1),ICNT
      GO TO 210
  220 REWIND KUNIT
      KUNIT=KUNIT+2
  225 CONTINUE
      GO TO 10
C  REACH HERE FOR STYLE = TOUGH, SWEET, STUFFY PRINT OUT
226   PRINT 186,ITITL
      PRINT 285,IHDR
      PRINT 285,IPER(K)
      ICONJ=0
      ITHE=0
      IPREP=0
      NIF=0
      DO 511 I=N,M
      IF (ICON2(1,I),EQ,2HIN,OR,ICON2(1,I),EQ,2HOF,OR,ICON2(1,I),EQ,3HFO
     1R) IPREP=IPREP+ICT(I)
      IF (ICON2(1,I),EQ,2HIF) NIF=NIF+ICT(I)
      IF (ICON2(1,I),EQ,3HTHE)ITHE=ITHE+ICT(I)
      IF (ICON2(1,I),EQ,3HAND,OR,ICON2(1,I),EQ,3HBUT)ICONJ=ICONJ+ICT(I)
      ISUM=ISUM+ICT(I)
511   CONTINUE
      CON=ISUM
      RRPR=0,
      TO=0,
      SW=0,
      ST=0,
C  ALNGTH = AVE, WD, LENGTH
      ALNGTH=FLOATF(NLET(K))/CON
      IF (ALNGTH,LT,5,5)TO=TO+1,
      IF (ALNGTH,GE,5,5,AND,ALNGTH,LE,6,0)SW=SW+1,
      IF (ALNGTH,GT,6,0)ST=ST+1,
C  NUMBER OF THES
505   RTHE=FLOATF(ITHE   )/CON
      IF (RTHE,LT,,05 )GO TO 506
      ST=ST+,5
      TO=TO+,5
      GO TO 507
506   SW=SW+1,
C  SENTENCE MAKEUP
507   ITSS=NSTAT(K)+NQUES(K)+NEXC(K)
      TSS=ITSS
      RSS=FLOATF(NSTAT(K))/TSS
      RQS=FLOATF(NQUES(K))/TSS
      RES=FLOATF(NEXC(K))/TSS


      IF ((RQS+RES),GT,0,)GO TO 508
      ST=ST+1,
      GO TO 509
508   SW=SW+,5
      TO=TO+,5
509   DO 227 I=1,2
```

```
      RRPR=RRPR+IPRO(I,K)
227   RPRO(I)=FLOATF(IPRO(I,K))/CON
C  PERSONAL PRONOUN MAKEUP
      IF (RPRO(1),GT.,017)GO TO 528
      SW=SW+.5
      ST=ST+.5
      GO TO 529
528   TO=TO+1.
529   IF (RPRO(2),GT.,03)GO TO 530
      TO=TO+.5
      ST=ST+.5
      GO TO 513
530   SW=SW+1.
C  ASENT = AVE. SENTENCE LENGTH
513   ASENT=CON/TSS
      IF (ASENT.LT.20.)GO TO 514
      ST=ST+.5
      TO=TO+.5
      GO TO 515
514   SW=SW+1.
C  NUMBER OF PREPS
515   RPRN=FLOATF(IPREP  )/CON
C  NUMBER OF CONJUNCTIONS
      RCNJ=FLOATF(ICONJ  )/CON
C  NUMBER OF IF-S
      RIF=FLOATF(NIF)/CON
      IF (RPRN.GE.,10)GO TO 516
      SW=SW+.5
      TO=TO+.5
      GO TO 517
516   ST=ST+1.
517   IF (RCNJ.GT.,04)GO TO 501
      SW=SW+.5
      ST=ST+.5
      GO TO 502
501   TO=TO+1.
502   IF (RIF.GE.,008)GO TO 503
      SW=SW+.5
      ST=ST+.5
      GO TO 504
503   TO=TO+1.
C  TYPE TOKEN RATIO
504   JSUM=M-N+1
      TTR=FLOATF(JSUM)/CON
      IF (TTR.LT.,48)TO=TO+1.
      IF (TTR.GT.,52)SW=SW+1.
      IF (TTR.GE.,48.AND.TTR.LE.,52)ST=ST+1.
      PRINT 228,ISUM,JSUM,TTR,ALNGTH,ASENT,(I,IPRO(I,K),RPRO(I),I=1,2)
      PRINT 394,7HAND/BUT,1H ,ICONJ,RCNJ,5HTHE-S,1H ,ITHE,RTHE,8HIN/OF/F
     10,1HR,IPREP,RPRN,4HIF-S,1H ,NIF,RIF
394   FORMAT (* NO. *,A8,A1,*=*,I4,* RATIO/TOTAL WDS=*,F7.4)
228   FORMAT (* TOTAL NUMBER OF WDS=*,I5/* TOTAL NO. DIFFERENT WDS.=*,I5
     1/* TYPE/TOKEN RATIO =*,F7.4,/* AVE. WD. LENGTH=*,F5.2/
     1* AVERAGE SENTENCE LENGTH=*,F6.2 /2(* NO.*,I2,* PERSON PRONOUNS=*,
     3I5,* RATIO TO TOTAL WDS=*,F7.4/))
      WRITE(6,395)NSTAT(K),NQUES(K),NEXC(K)
```

```
      WRITE (6,405)RSS,ROS,RES
      TO=TO/7.5
      SW=SW/7.5
      ST=ST/7.
      WRITE (6,393)TO,SW,ST
393   FORMAT (/* TOUGH , SWEET , STUFFY COUNT =*,3F5.2)
      GO TO 185
230   STOP
C
C
  235 FORMAT (10A8)
  240 FORMAT (/////,112H     CONTENT ANALYSIS PROGRAM DESIGNED AND IMPLE
     1MENTED AT THE RESEARCH COMPUTING CENTER, UNIV. OF MASSACHUSETTS )
  245 FORMAT (113H     UNDER THE GUIDANCE OF DR JULES ZIMMER, SCHOOL OF E
     1DUCATION BY KATHLEEN H. COWLES, ASSISTANT TO THE DIRECTOR, )
  250 FORMAT (27X,58H NANCY LEE, LINDA MAO, AND KATHARINE PARANYA, PROGR
     1AMMERS ,/////)
  255 FORMAT (I2)
  260 FORMAT (4A8)
  265 FORMAT (1X,8A8)
  270 FORMAT (10A8)
  275 FORMAT (I1,9A8,A7)
  280 FORMAT (3I1,A3,2I1,2I2,2I1,2X,A13,4X,A3,2X,I1)
285   FORMAT (1X,10A8//)
  290 FORMAT (36H WORDS IN TEXT AND THEIR FREQUENCIES,/)
  295 FORMAT (21H  THE WORDS USED BY  ,A8,3/H AND THEIR FREQUENCIES ARE
     1AS FOLLOWS)
  300 FORMAT (15X,2A8,12X,I8)
  305 FORMAT (24H  THE SENTENCES USED BY ,A8)
  310 FORMAT (1H0,I8,5(2X,2A8),(/9X,5(2X,2A8)))
  315 FORMAT (39H THE NO. OF SELF-POSITIVE SENTENCES ARE,I8,2/H  THE TOT
     1AL  SENTENCES ARE ,I8/)
  320 FORMAT (/,56H  RATIO OF SELF-POSITIVE SENTENCES TO TOTAL SENTENCES
     1 IS,F5.2/)
  325 FORMAT (/,40H  THE NO. OF SELF-NEGATIVE SENTENCES ARE,I8,25H  THE
     1TOTAL SENTENCES ARE,I8/)
  330 FORMAT (/,56H  RATIO OF SELF-NEGATIVE SENTENCES TO TOTAL SENTENCES
     1 IS,F5.2/)
  335 FORMAT (/,49H  THE NO. OF SELF-POSITIVE-NEGATIVE SENTENCES ARE,I8,
     125H  THE TOTAL SENTENCES ARE,I8/)
  340 FORMAT (/,65H  RATIO OF SELF-POSITIVE-NEGATIVE SENTENCES TO TOTAL
     1SENTENCES IS,F5.2/)
  345 FORMAT (1X,20H**********)
  350 FORMAT (/,25H  THE RATIO FOR SESSION  ,I1/)
  355 FORMAT (/,15H SELF-POSITIVE=,I4,8H  TOTAL=,I4,8H  RATIO=,F5.2/)
  360 FORMAT (/,16H  SELF-NEGATIVE=,I4,8H  TOTAL=,I4,8H  RATIO=,F5.2/)
  365 FORMAT (/,25H  SELF-POSITIVE-NEGATIVE=,I4,8H  TOTAL=,I4,8H  RATIO=
     1,F5.2/)
  370 FORMAT (/,82H   CALCULATE THE TOTAL WORDS IN THE SESSION FIRST,
     1    PLEASE.,.,.,.,.,.,.,.,.,.,.,.,/)
  375 FORMAT (/,29H  TOTAL WORDS IN CATEGORY ARE,I8,28H TOTAL WORDS IN S
     1ESSION ARE ,I8/)
  380 FORMAT (/,55H  TOTAL WORDS IN CATEGORY PER TOTAL WORDS IN SESSION
     1IS,F5.2/)
  385 FORMAT (1X,2A8,2X,I2,5X,I8,2X,I8,10X,F10.2,18X,F10.2,1X,I1)
  390 FORMAT (//,28H TOTAL NUMBER OF SENTENCES =,I5)
```

```
395 FORMAT (23H NUMBER OF STATEMENTS =,I5/
   1* NUMBER OF QUESTIONS =*,I5/* NUMBER OF EXCLAMATIONS =*,I5)
400 FORMAT (22H NUMBER OF QUESTIONS =,I5)
405 FORMAT (31H RATIO (STATEMENTS/SENTENCES) =,F5.2/
   1* RATIO (QUESTIONS/SENTENCES) =*,F5.2/* RATIO (EXCLAMATION/SENTENC
   2ES) =*,F5.2)
410 FORMAT (30H RATIO (QUESTIONS/SENTENCES) =,F5.2)
415 FORMAT (1H1)
420 FORMAT (1X,12HTOKENS ARE  ,I8,16H AND TYPES ARE  ,I8,7H  FOR  ,A8)
425 FORMAT (1X,12HTOKENS ARE  ,I8,16H AND TYPES ARE  ,I8)
430 FORMAT (23H0 TYPE TOKEN RATIO IS  ,F5.2,  5H FOR ,A8)
435 FORMAT (23H0 TYPE TOKEN RATIO IS  ,F5.2)
440 FORMAT (19H   SYNOPSIS FOR   ,A8//)
445 FORMAT (7X,5HTITLE,5X,6HNUMBER,5X,6HTOKENS,5X,5HTYPES,5X,19HRATIO(
   1TYPES/TOKENS),2X,26HRATIO(TOKENS/TOTAL TOKENS),/)
450 FORMAT (10(/),37H WORDS AND THEIR FREQUENCIES USED BY ,A8,25H WHIC
   1H WERE NOT KEYWORDS )
    END
```

```
      SUBROUTINE READIN (ISEL,NCHAR,LAST,IPH,IPARENS,KK,NPEOPLE)
      EQUIVALENCE (ICO,IIWORD),(ITPWD,ITPW)
      EQUIVALENCE (ICON1,ICON2)
      EQUIVALENCE (ISPKW,IKWD)
      EQUIVALENCE (ICLZ2,ICLZ)
      DOUBLE PRECISION ICON1,ICO,IWORDA,ISPKW,ICLZ
      COMMON /A/ ISIMBOL(30),ISELF(8),ICONJUN(11),IDO
      COMMON /8/ ITAPE,IREPT,IKEY,ISYMBL,IKEY2,IKEY3,K1,K2,KT(6)
      COMMON IFMT(10),NSTAT(4),NQUES(4),IPER(4),NEXC(4),IIWD(4)
      COMMON /6/ ICPAR,ICO,IIWORD,ICLZ(100),IKP,ICLZ2(2,100),KP,KNT(4)
      COMMON/7/LET(16)
      COMMON/4/IJJ(200)
      COMMON /C/ ICON1(4050),ICT(4050),ICON2(2,4050),ISPKW(500),IKWD(2,5
     100),ITPWD(2,1000),ITPW(1000)
      COMMON /B/ IPART(20),IDESC(101,2)
      COMMON/D/IPERPRON(8)
      COMMON/10/NLET(4),IPRO(3,4)
      DIMENSION IIWORD(2),IPRON(25)
C     **********************************************************************
      DATA (IPRON=1HI,2HME,2HMY,4HMINE,3HI-M,6HMYSELF,4HI-VE,3HI-D,
     13HYOU,4HYOUR,6HYOU-RE,6HYOU-VE,8HYOURSELF,5HYOU-D,5HYOURS)
C     **********************************************************************
C     INITIALIZE
      DO 4 I=1,4
      KNT(I)=0
4     NLET(I)=0
      NSENT=0
      ICPAR=0
C  READ DATA FROM UNIT 12
C     **********************************************************************
      L=12
      NCON=0
      IPRN=0
      IJ=1
      ISW=1
      ISY=0
      IERR=1
      ICZ=0
      IKP=0
      NSELF=0
      NPOSIT=0
      NEGAT=0
      ISN=0
      IRP=1H)
      ILP=1H(
      ILINE=0
      IF (IKEY.EQ.0) GO TO 15
      JKY=IKEY
      LKY=JKY-1
      DO 10 I=1,JKY
      DO 10 J=I,LKY
      IF (ISPKW(I)-ISPKW(J+1)) 10,10,5
    5 IWORDA=ISPKW(I)
      ISPKW(I)=ISPKW(J+1)
      ISPKW(J+1)=IWORDA
   10 CONTINUE
```

```
C     IF REPEATING DATA FROM PREVIOUS SAMPLE  GO READ FROM UNIT 10
C     ************************************************************
   15 IF (IREPT.3HYES) 25,230,25
   20 IF (ITAPE.EQ.2) GO TO 185
   25 K=0
C     READ A LINE OF TEXT
C     ************************************************************
      READ (L,IFMT) ISEQ,(IJJ(J),J=1,NCHAR)
      ILINE=ILINE+1
      IF (EOF,L) 240,30
   30 IF (IREPT.EQ.3HYES) GO TO 35
C     FOR NEW DATA SAMPLE WRITE LINE OUT ON UNIT 10
C     ************************************************************
      WRITE (10,IFMT) ISEQ,(IJJ(J),J=1,NCHAR)
   35 IF(IPR.NE.1)GO TO 45
C     IF SPECIFIED, PRINT TEXT OUT
C     ************************************************************
   40 PRINT 250, ISEQ,(IJJ(J),J=1,NCHAR)
C     LOOP FOR EACH CHARACTER IN LINE
C     ************************************************************
C     ************************************************************
   45 DO 235 I=1,NCHAR
      K=K+1
      IF (IJJ(I).EQ.1H/.AND.NPEOPLE.GT.1) GO TO 55
C     WHEN AFTER 16 CHARACTRS AFTER 1ST SLASH HAVE NOT HIT END OF
C        SPEAKERS NAME, LEAVE THE LOOP.
C     ************************************************************
      IF ((ISW.EQ.2).AND.(K.EQ.16)) GO TO 75
C     BLANK INDICATES END OF A WORD
      IF (IJJ(I).EQ.1H ) GO TO 145
C     LEFT PARENTHESIS
      IF (IJJ(I).EQ.ILP) GO TO 150
C     RIGHT PARENTHESIS
      IF (IJJ(I).EQ.IRP) GO TO 165
C     CHECK FOR SYMBOL
      DO 50 J=1,30
      IF (IJJ(I).EQ.ISIMBOL(J)) GO TO 140
   50 CONTINUE
      IF (I.EQ.NCHAR) GO TO 145
      GO TO 235
C     AT BEGINNING OF NAME,ISW=1 , AT END OF NAME,ISW=2
C     ************************************************************
   55 GO TO (85,60), ISW
C     REACH HERE AFTER SECOND SLASH SEPARATING SPEAKERS NAME
C     ************************************************************
   60 IJJ(I)=1H
C     ENCODE NAME
C     ************************************************************
      CALL ENCDE (K,ICO,I)
      ICON1(4049)=ICO
      DO 65 J=1,4
C     FIND WHICH PERSON IS NEW SPEAKER
C     ************************************************************
      IF (ICON2(1,4049).EQ.IPER(J)) GO TO 80
   65 CONTINUE
C     ERROR MESSAGE WHEN SPEAKER NOT FOUND IN LIST OF POSSIBLE SPEAKERS
```

```
C  ***********************************************************************
      PRINT IFMT, (IJJ(J),J=1,NCHAR)
      PRINT 265, ICON2(1,4049),IPER(1),IPER(2),IPER(3),IPER(4)
C     SET ERROR SWITCH
C  ***********************************************************************
   70 IERR=2
      ISW=1
      GO TO 235
C     REACH HERE WHEN HAVE PROCESSED 16 CHARS AFTER FIRST SLASH FOR
C        SPEAKERS NAME AND STILL HAVE NOT HIT END OF NAME - ERROR CONDIT
C     ENCODE THE 16 CHARS HAVE
C  ***********************************************************************
   75 CALL ENCDE (K,ICO,I)
      ICON1(4049)=ICO
C     PRINT ERROR MESSAGE AND IGNORE REST OF THIS SPEAKERS CONVRSATION
C  ***********************************************************************
      PRINT 270, ICON2(1,4049),ICON2(2,4049)
      PRINT IFMT, (IJJ(J),J=1,NCHAR)
      GO TO 70
C     INITIALIZE AFTER FIND A NEW PERSON SPEAKING
C  ***********************************************************************
   80 IJ=J
      ISW=1
      GO TO 235
C     REACH HERE AFTER FIRST SLASH SEPARATING SPEAKERS NAME
C  ***********************************************************************
   85 K=0
      ICO=0
      IF (ITAPE.EQ.7)ICZ=1
      ISW=2
      IERR=1
      INDD=I-1
      IF (ITAPE.EQ.7)CALL CLAUSE(I,ICZ,IJ)
      GO TO 235
89    IPRN=1
C     REACH HERE FOR EACH WORD
C  ***********************************************************************
C     ENCODE THE WORD
C  ***********************************************************************
90    KS=K
      CALL ENCDE (K,ICO,I)
      IF (IIWORD(1).EQ.1H ) GO TO 235
92    ITA=ITAPE+1
C  FOR INTERVIEW CONTENT ANALYSIS JU   AHEAD
C  ***********************************************************************
      GO TO (225,115,115,95,115,125,125,119,134),ITA
C     COUNTER FOR UP TO 100 WORDS IN A CLAUSE
   95 IF (IKP.NE.100) IKP=IKP+1
C     ADD WORD ONTO CLAUSE
      ICLZ(IKP)=ICO
      IF (ICZ.NE.1) GO TO 115
      ICZ=0
      DO 110 KP=1,IKP
      IF (IKEY.EQ.0) GO TO 105
      DO 100 KQ=1,IKEY
      IF (ICLZ(KP)-ISPKW(KQ)) 110,105,100
```

```
  100 CONTINUE
      GO TO 110
  105 WRITE (20) ICLZ(KP),IKP,(ICLZ(JKP),JKP=1,IKP),ISEQ
  110 CONTINUE
      IKP=0
  115 CALL NEWORD (IJ,I,NPEOPLE,ICO,1)
      GO TO 235
C  REACH HERE FOR CLAUSES
C  ***********************************************************************
C  ***********************************************************************
115   IF(ICZ.EQ.0)GO TO 120
      CALL ENDING(ICO,JJ)
      CALL PART(1,J-1,ICO)
      II=0
      CALL CLAUSE(I-1,II,IJ)
      CALL PART(JJ,JJ,ICO)
  120 CALL CLAUSE (I,ICZ,IJ)
121   FORMAT (3I6)
      IF (IPRN.EQ.1.AND.IPARENS.EQ.2)GO TO 234
      IF (IIWORD(1).EQ.1H,.OR.IIWORD(1).EQ.1H..OR.IIWORD(1).EQ.1H$.OR.
     1IIWORD(1).EQ. ISIMBOL(2))GO TO 235
      CALL NEWORD(IJ,I,NPEOPLE,ICO,1)
      GO TO 235
  125 IF (IKP.NE.100) IKP=IKP+1
      NCON=NCON+1
      ICLZ(IKP)=ICO
      IF (ICZ.EQ.0)GO TO 235
      ICZ=0
      CALL PARS
      IF (ITA.NE.7)GO TO 135
126   DO 130 KK=1,IKP
      IF (IPART(IDESC(KK,1)).NE.4HNOUN.AND.IPART(IDESC(KK,1)).NE.4HVERB)
     1 GO TO 130
      CALL NEWORD (IJ,I,NPEOPLE,ICLZ(KK),1)
  130 CONTINUE
  135 IKP=0
      GO TO 235
C  END OF INTERVIEW CONTENT ANALYSIS WORK
C  ***********************************************************************
C  REACH HERE FOR STYLE - TOUGH, SWEET, STUFFY
134   CALL NEWORD(IJ,I,NPEOPLE,ICO,1)
136   NLET(IJ)=NLET(IJ)+KS
336   DO 337 KK=1,15
      IF (IIWORD(1).EQ.IPRON(KK))GO TO 338
337   CONTINUE
      GO TO 235
338   IF (KK .LE.8)IPRO(1,IJ)=IPRO(1,IJ)+1
      IF (KK.GT.8)                IPRO(2,IJ)=IPRO(2,IJ)+1
      GO TO 235
C     REACH HERE WHEN HIT A SYMBOL
C      FOR CONCORDANCE SET ICZ FOR END OF A CLAUSE
  140 IF (IERR.EQ.2) GO TO 180
      IF (ISYMBL.EQ.1)IJJ(I)=1H
      IF (J.GT.3)GO TO 90
      KS=K
      CALL ENCDE(K,ICO,I)
```

```
      IF (IIWORD(1).EQ.3HDR,.OR.IIWORD(1).EQ. 3HMR,.OR.IIWORD(1).EQ.
     *14HMRS,)GO TO 92
      IF (IIWORD(1).EQ.1H )ICO=0
142   IEND=2
      ICZ=1
      ISY=2
C     COUNT NUMBER OF STATEMENTS AND QUESTIONS
      IF (IJJ(I).EQ.1H.) NSTAT(IJ)=NSTAT(IJ)+1
      IF (IJJ(I).EQ.IDO) NQUES(IJ)=NQUES(IJ)+1
      IF (IJJ(I).EQ.ISIMBOL(10)) NEXC(IJ)=NEXC(IJ)+1
      GO TO 92
C     REACH HERE AT END OF ANY WORD INDICATED BY BLANK
  145 IF (K.EQ.1) GO TO 180
C     FOR BLANK BETWEEN SLASHES FORGET BLANKS
      IF (ISW.EQ.2) GO TO 235
C     WHEN IERR=2, DONT RECORD WORD
      ISY=1
      IF (IERR.EQ.2) GO TO 180
      GO TO 90
C     REACH HERE AFTER LEFT PARENTHESIS
150   IF (ITAPE.EQ.7.AND.IPARENS.EQ.2)GO TO 90
      IJJ(I)=1H
      IF (IPARENS-2) 160,155,155
C     IF IPARENS GE 2 INCLUDE WORD
  155 K=K+1
      IF (K.NE.0) GO TO 90
      GO TO 235
  160 IERR=2
      GO TO 235
C     REACH HERE AFTER RIGHT PARENTHESIS
165   IF (ITAPE.EQ.7.AND.IPARENS.EQ.2)GO TO 90
      IJJ(I)=1H
      IF (IPARENS-2) 170,175,90
  170 IERR=1
      K=0
      GO TO 235
C     REACH HERE AFTER RIGHT PARENTHESIS WHEN INCLUDING WORD BUT NOT
C        COUNTING IT
  175 CALL ENCDE (K,ICO,I)
      IF (IIWORD(1).EQ.1H ) GO TO 235
      CALL NEWORD (IJ,I,NPEOPLE,ICO,2)
C     REACH HERE WHEN DONT WANT TO RECORD A NEW WORD
  180 K=0
      GO TO 235
C     REACH HERE FOR KEY WORDS ANALYSIS (ITAPE=2)
  185 IP=IKEY
C     COMPUTE UNIT TO READ WORDS OFF OF FOR 1ST PERSON
      I=LAST-(2*NPEOPLE-2)
      IT=1
      IF (XMODF(I,2).EQ.0) IT=-1
C     UNIT TO WRITE PERSONS WORDS ONTO
      ITI=I+IT
C     LOOP FOR EACH PERSONS WORDS
      DO 220 II=1,NPEOPLE
C     STARTING PT IN ARRAY FOR PERSONS WORDS
      IL=(II-1)*1000
```

```
C       READ WORD, FREQUENCY, AND TAG FOR WHETHER IS A PREVIOUS KEYWORD
  190   READ (I) ICO,ICNT,JTG
        IF (EOF,I) 215,195
C       SEE IF WORD IS IN KEY WORD LIST
  195   DO 200 LK=1,IP
        IF (ICO.EQ.ISPKW(LK)) GO TO 205
  200   CONTINUE
        GO TO 210
  205   IL=IL+1
C       PUT WORD AND ITS FREQ INTO ARRAY AND TAG IT
        ICT(IL)=ICNT
        ICON1(IL)=ICO
        JTG=1
        IF (NPEOPLE.GT.1) ICON1(II*1000)=ICON1(II*1000)+1
        IF (NPEOPLE.EQ.1) ICON1(4000)=ICON1(4000)+1
  210   WRITE (IT1) ICO,ICNT,JTG
        GO TO 190
  215   REWIND I
        END FILE IT1
        REWIND IT1
        LAST=IT1
        I=I+2
        IF (I.GT.2*NPEOPLE) RETURN
        IT1=I+IT
  220   CONTINUE
C       END OF LOOP FOR EACH PERSONS WORDS
        PRINT 275
        RETURN
C       FREACH HERE AFTER EACH WORD FOR SENTENCE ANALYSIS
C       CAN DO A SENTENCE ANALYSIS FOR ONLY 2 PEOPLE
  225   IF (IJ.GT.2) GO TO 235
        CALL SENT (IJ,ICO)
        GO TO 235
C       READ TEXT FROM UNIT 10 WHEN REPEATING PREVIOUS DATA SAMPLE
C  ***********************************************************************
  230   L=10
        REWIND L
        GO TO 20
234     IF (IJJ(I).EQ.1H )GO TO 235
        IPRN=0
  235   CONTINUE
C       END OF LOOP FOR EACH CHARACTER IN A LINE OF TEXT
C  ***********************************************************************
C  ***********************************************************************
        IF (ITAPE.NE.5) GO TO 20
        PRINT 255
        PRINT IFMT, ISEQ,(IJJ(J),J=1,NCHAR)
        GO TO 20
  240   END FILE 20
        PER=(FLOATF(ICPAR)/FLOATF(NCON))*100.+.5
        IF (ITAPE.EQ.5) PRINT 260, ICPAR,NCON,PER
        RETURN
C
C
  245   FORMAT (1H1)
  250   FORMAT (1X,A8,1X,80A1)
```

```
255 FORMAT (/)
260 FORMAT (/, 23H TOTAL WORDS PARSED IS ,I5, 21H TOTAL WORDS READ IS
   1,I5,  9H THIS IS ,F7.2,  8H PERCENT)
265 FORMAT (86H THE NAME OF THE SPEAKER WAS NOT RECOGNIZABLE, HIS CONV
   1ERSATION WAS IGNORED----------,/1X,A8,3X,4A8)
270 FORMAT (90H SPEAKER NAME GREATER THAN 16 LETTERS PROBABLY SECOND S
   1LASH MISSING, CONVERSATION IGNORED.,/1X,2A8)
275 FORMAT (32H ERROR IN LOGIC AT KEY WORD LOOP)
    END
```

```
      SUBROUTINE MDTPC(IB,IN,IJ)
C  THIS SUBROUTINE LOOKS AT WORDS IN A CLAUSE TO DETERMINE VALENCE AND
C         TOPIC
      COMMON /A/ ISYMBOL(30),ISELF(8),ICONJUN(11),IDO
      COMMON/6/ ICPAR,ICO,IIWORD(2),ICLZ(100),IKP,ICLZ2(2,100),KP,KNT(4)
      COMMON/7/LET(16)
      COMMON /8/ ITAPE,IREPT,IKEY,ISYMBL,IKEY2,IKEY3,K1,K2,KT(6)
      COMMON/12/ITTPC(7,4),ICMBN(4),IC3(4),IAFF(4),IPS(4),ING(4),
     1IPRS(3,4),ITNS(3,4),NEUT(4),MPN(4),MAC(4)
      COMMON /C/ ICON1(4050),ICT(4050),ICON2(2,4050),ISPKW(500),IKWD(2,5
     100),ITPWD(2,1000),ITPW(1000),ICOG(2,200),ICOGG(200)
      COMMON /X/ JPR,JJPR,JTN,JJTN,JMODE,JJMODE,JVAL,JJVAL,JTP,JJTP,IX,
     1IY,JY,ITY,ISPOT(120,50),IAPH(14),NLR(4),IBW(4),IW(20)
      DIMENSION MODE(3),IVAL(3),ITP(7),NUM(10)
      EQUIVALENCE (ICON1,ICON2),(ISPKW,IKWD),(IIPW,ITPWD),(ICO,IIWORD),
     1(ICLZ,ICLZ2),(ICOG,ICOGG)
      DOUBLE PRECISION ICLZ,ICO,ISPKW,ICON1,ITPW,ICOGG
C  ***************************************************************
      DATA(NUM=1H0,1H1,1H2,1H3,1H4,1H5,1H6,1H7,1H8,1H9)
C  ***************************************************************
      DO 4 I=1,3
      MODE(I)=1H
4     IVAL(I)=1H
      DO 5 I=1,7
5     ITP(I)=1H
C  ***************************************************************
C  BEGIN LOOP TO LOOK AT WORDS
C  ***************************************************************
      DO 70 I=IB,IN
      ICO=ICLZ(I)
C  FILL ARRAY LET WITH LETTERS OF WORD
C  ***************************************************************
      CALL ENDING(ICO,JJ)
      ND=JJ-1
      DO 170 K=1,12
      IF(LET(JJ).EQ.ISIMBOL(K))CALL PART(1,ND,ICO)
  170 CONTINUE
      ITH=0
      LINE=1
C  CHECK FOR AFFECTIVE WORDS
C  ***************************************************************
      IF(ICLZ2(1,I).EQ.4HFEEL.OR.ICLZ2(1,I).EQ.5HFEELS.OR.ICLZ2(1,I).EQ.
     14HFELT.OR.ICLZ2(1,I).EQ.7HFEELING)GO TO 200
      IF(ICLZ2(1,I).EQ.4HSEEM.OR.ICLZ2(1,I).EQ.5HSEEMS.OR.ICLZ2(1,I).EQ.
     16HSEEMED.OR.ICLZ2(1,I).EQ.7HSEEMING)GO TO 200
      GO TO 6
  200 MODE(3)=1H2
      IVAL(1)=1H0
      GO TO 70
6     DO 10 J=1,K2
      IF (ICO     .NE.ISPKW(J))GO TO 10
      MODE(3)=1H2
C  CHECK FOR NOT BEFORE AFFECTIVE WORD
C  ***************************************************************
      IK=I-1
      DO 8 JK=IB,IK
```

```
      IF (ICLZ2(1,JK ),EQ,3HNOT)GO TO 7
      IF(ICLZ2(1,JK),EQ,5HNEVER)GO TO 7
      CALL ENDING(ICLZ(JK ),JJ)
      CALL PART(JJ+2,JJ,IND)
C  CHECK FOR NOT BEFORE AFFECTIVE WORD
C  ***********************************************************************
      IF (IND,EQ,3HN+T)GO TO 7
8     CONTINUE
C  DECIDE ON VALENCE
C  ***********************************************************************
      IF (J,LE,IKEY )IVAL(3)=1H2
      IF (J,GT,IKEY )IVAL(2)=1H1
      GO TO 70
C  VALENCE SHIFT FOR AFFECT WORDS PRECEDED BY A NEGATIVE
C  ***********************************************************************
    7 IF(J,LE,IKEY)IVAL(1)=1H0
      IF(J,GT,IKEY)IVAL(3)=1H2
      GO TO 70
10    CONTINUE
122   IF (ITM,EQ,8)GO TO (20,22),LINE
C  THIS SECTION STRIPS ENDINGS OFF OF WORDS
C  ***********************************************************************
      ITM=ITM+1
      GO TO (11,12,13,14,15,16,17,18),ITM
C  ENDING S
11    ND=JJ-1
      IF (LET(JJ),EQ,1HS)GO TO 19
      ITM=ITM+1
C  ENDING E
12    IF (LET(JJ),EQ,1HE)GO TO 19
      ITM=ITM+1
C  ENDING ES
13    ND=JJ-2
      IF (LET(JJ),EQ,1HS.AND.LET(JJ-1),EQ,1HE)GO TO 19
      ITM=ITM+1
C  ENDING ED
14    IF (LET(JJ),EQ,1HD.AND.LET(JJ-1),EQ,1HE)GO TO 19
      ITM=ITM+1
C  ENDING LY
15    IF (LET(JJ),EQ,1HY.AND.LET(JJ-1),EQ,1HL)GO TO 19
      ITM=ITM+1
C  ENDING ING
16    ND=JJ-3
      IF (LET(JJ),EQ,1HG.AND.LET(JJ-1),EQ,1HN.AND.LET(JJ-2),EQ,1HI)
     1GO TO 19
      ITM=ITM+1
C  ENDING FUL
17    IF (LET(JJ),EQ,1HL.AND.LET(JJ-1),EQ,1HU.AND.LET(JJ-2),EQ,1HF)
     1GO TO 19
      ITM=ITM+1
C  ENDING FULLY
18    ND=JJ-5
      CALL PART(JJ-4,JJ,IND)
      IF (IND,EQ,5HFULLY)GO TO 19
      GO TO (20,22),LINE
19    CALL PART(1,ND,ICO)
```

```
      GO TO (6,123),LINE
20    ITM=0
      ICO=ICLZ(I)
      LINE=2
C  CHECK FOR COGNITIVE WORDS
C  ***************************************************************
123   DO 21 J=1,IKEY3
      IF (ICO,NE,ICOGG(J))GO TO 21
      MODE(2)=1H1
      GO TO 70
21    CONTINUE
      GO TO 122
22    KK=KT(5)
      ICO=ICLZ(I)
      ITM=0
C  SECTION TO CHECK TOPICS
C  ***************************************************************
      CALL PART(JJ-4,JJ,IWD)
C  ENDING OLOGY
      IF (IWD,EQ,5HOLOGY)GO TO 55
C  CHECK TOPIC KEY WORDS
25    DO 60 J=1,KK
      IF (ICO     ,NE,ITPW(J))GO TO 60
      IF (ITPWD(1,J),NE,6HSCHOOL)GO TO 26
      IF (ICLZ2(1,I-1),EQ,4HHIGH,OR,ICLZ2(1,I-1),EQ,6HJUNIOR,OR,
     1ICLZ2(1,I-1),EQ,8HELEMENTA,OR,ICLZ2(1,I-1),EQ,7HPRIMARY,OR,
     2ICLZ2(1,I-1),EQ,7HPRIVATE)GO TO 60
26    DO 40 K=1,5
      IF (J,LE,KT(K))GO TO 50
40    CONTINUE
      GO TO 60
C  TOPIC WORD FOUND - DECIDE WHICH TOPIC
C  ***************************************************************
50    ITP(K+1)=NUM(K+1)
      GO TO 70
55    ITP(2)=1H1
      MODE(2)=1H1
      GO TO 70
60    CONTINUE
C  NO TOPIC WORD FOUND - PREPARE TO STRIP ENDINGS
C  ***************************************************************
      IF (ITM,EQ,2)GO TO 70
      ITM=ITM+1
      IF (ITM,EQ,2)GO TO 64
C  STRIP ENDING S
      IF (LET(JJ),NE,1HS)GO TO 70
      GO TO 65
C  STRIP ENDING E
64    IF(LET(JJ-1),EQ,1HE)GO TO 66
      IF(LET(JJ-1),EQ,1H-)GO TO 66
      GO TO 70
66    CALL PART(1,JJ-2,ICO)
      GO TO 25
65    CALL PART(1,JJ-1,ICO)
      GO TO 25
C  GO BACK AND CHECK STRIPPED WORDS
```

```
C  ***********************************************************************
70     CONTINUE
C  END OF LOOP - ALL WORDS CHECKED FOR MODE VALENCE AND TOPIC
C  ***********************************************************************
C  ***********************************************************************
       IF(IVAL(2).EQ.1H1.OR.IVAL(3).EQ.1H2)IVAL(1)=1H
       DO 80 II=1,3
       IF (MODE(II).NE.1H )GO TO 85
80     CONTINUE
C  DEFAULT CONDITION
C  ***********************************************************************
       MODE(1)=1H0
       IVAL(1)=1H0
85     DO 90 II=1,7
       IF (ITP(II).NE.1H )GO TO 100
90     CONTINUE
       ITP(1)=1H0
C  PRINT MODE, VALENCE, TOPIC
C  ***********************************************************************
  100  IF(MODE(1).EQ.1H0)JMODE=7HNEUTRAL
       IF(MODE(2).EQ.1H1)JMODE=7HCOGNATE
       IF(MODE(3).EQ.1H2)JMODE=6HAFFECT
       IF(MODE(2).EQ.1H1.AND.MODE(3).EQ.1H2)JMODE=5HMIXED
       PRINT 9080,JMODE
 9080  FORMAT (* MODE     =    *,A8)
       IF(IVAL(1).EQ.1H0)JVAL=7HNEUTRAL
       IF(IVAL(2).EQ.1H1)JVAL=8HPOSITIVE
       IF(IVAL(3).EQ.1H2)JVAL=8HNEGATIVE
       IF(IVAL(2).EQ.1H1.AND.IVAL(3).EQ.1H2)JVAL=5HMIXED
       IF(JMODE.EQ.7HCOGNATE.OR.JMODE.EQ.7HNEUTRAL)JVAL=7HNEUTRAL
       PRINT 9081,JVAL
 9081  FORMAT (* VALENCE =    *,A8)
       IF(ITP(1).EQ.1H0)JTP=5HOTHER
       IF(ITP(2).EQ.1H1)JTP=6HSCHOOL
       IF(ITP(3).EQ.1H2)JTP=6HFAMILY
       IF(ITP(2).EQ.1H1.AND.ITP(3).EQ.1H2)JTP=5HCOMBO
       PRINT 9082,JTP
 9082  FORMAT (* TOPIC    =    *,A8)
C  TOTAL UP FOR SUMMARY TABLE
C  ***********************************************************************
       IF(JMODE.EQ.7HNEUTRAL)NEUT(IJ)=NEUT(IJ)+1
       IF(JMODE.EQ.7HCOGNATE)ICG(IJ)=ICG(IJ)+1
       IF(JMODE.EQ.6HAFFECT)IAFF(IJ)=IAFF(IJ)+1
       IF(JMODE.EQ.5HMIXED)MAC(IJ)=MAC(IJ)+1
       IF(JVAL.EQ.8HPOSITIVE)IPS(IJ)=IPS(IJ)+1
       IF(JVAL.EQ.8HNEGATIVE)ING(IJ)=ING(IJ)+1
       IF(JVAL.EQ.5HMIXED)MPN(IJ)=MPN(IJ)+1
       IF(JTP.EQ.6HSCHOOL)ITTPC(1,IJ)=ITTPC(1,IJ)+1
       IF(JTP.EQ.6HFAMILY)ITTPC(2,IJ)=ITTPC(2,IJ)+1
       IF(JTP.EQ.5HCOMBO)ICMBN(IJ)=ICMBN(IJ)+1
       IF(JVAL.EQ.5HMIXED)MPN(IJ)=MPN(IJ)+1
       RETURN
       END
```

```
      SUBROUTINE CLAUSE(II,ICZ,IJ)
C  THIS SUBROUTINE SEPARATES A SENTENCE INTO INDEPENDENT CLAUSES
C  ICZ=1 AT END OF A SENTENCE, 0 OTHERWISE
C  IJ=SPEAKER NUMBER
C  II=CHARACTER POSITION IN LINE OF LAST CHARACTER IN WORD
      DIMENSION ICONJ(20),INT(20),IDEM(15),IEXCP(20)
      COMMON /A/ ISYMBOL(30),ISELF(8),ICONJUN(11),IDO
      COMMON/B/IPART(20),IDESC(101,2)
      COMMON/E/IPERS(60)
      COMMON IFMT(10),NSTAT(4),NQUES(4),IPER(4),NEXC(4),IIWD(4)
      COMMON/4/IJJ(200)
      COMMON/6/ ICPAR,ICO,IIWORD(2),ICLZ(100),IKP,ICLZ2(2,100),KP,KNT(4)
      COMMON/7/LET(16)
      COMMON /8/ ITAPE,IREPT,IKEY,ISYMBL,IKEY2,IKEY3,K1,K2,KT(6)
      COMMON/11/MIN(4),MAX(4),TWO(4)
      COMMON/14/JKP,ISV(100)
      COMMON /X/ JPR,JJPR,JTN,JJTN,JMODE,JJMODE,JVAL,JJVAL,JTP,JJTP,IX,
     1IY,JY,ITY,ISPOT(120,50),IAPH(14),NLR(4),IBW(4),IW(20)
      COMMON /Z/ MAT1(3,3,8),MAT2(3,3,8)
      DOUBLE PRECISION ICLZ,ICO,ISV
      EQUIVALENCE (ICO,IIWORD)
      EQUIVALENCE(ICLZ,ICLZ2)
C  ********************************************************************
      DATA (ICONJ=3HAND,3HBUT,2HOR,6HANYWAY,7HHOWEVER,6HEXCEPT,
     17HNEITHER,3HNOR,7HHOWEVER,4HPLUS,2HSO,3HYET)
      DATA (INT=4HWELL,6HANYHOW,2HOH,3HYES,2HNO,2HAS,3HALL,3HNOW,
     14HTHEN,4HMOST,4HWHEN,8HTHEREFOR,8HEVERYBOD)
      DATA(IDEM=2HIT,4HIT-S,5HIT-LL,4HIT-D,4HTHIS,4HTHAT,5HTHESE,5HTHOSE
     1,6HTHAT-S,7HTHIS-LL,7HTHAT-LL,6HTHAT-D,8HTHOSE-RE,8HTHESE-RE)
      DATA(IPERS=1HI,4HI-VE,3HI-M,3HI-D,4HI-LL,2HWE,5HWE-LL,5HWE-VE,4HWE
     1-D,5HWE-RE,3HYOU,6HYOU-VE,6HYOU-RE,
     15HYOU-D,6HYOU-LL,2HHE,4HHE-S,4HHE-D,4HHE-D,5HHE-LL,5HSHE,5HSHE-S,
     25HSHE-D,5HSHE-D,6HSHE-LL,2HIT,4HIT-S,4HIT-D,4HIT-D,5HIT-LL,4HTHEY,
     37HTHEY-VE,7HTHEY-RE,6HTHEY-D,6HTHEY-D,7HTHEY-LL,7HTHAT-LL,6HTHAT-S
     4      ,5HTHERE,7HTHERE-S,8HTHERE-LL)
      DATA(IEXCP=5HWHERE,4HJUST,5HWHICH,4HEVEN,7HBECAUSE,4HMUCH)
      DATA(IEX=1H%)
C  ********************************************************************
C  ICO= NEW WORD
      IF (ICO.EQ.0.OR.IIWORD(1).EQ.1H )GO TO 4
      IF (IIWORD(1).EQ.1H..OR.IIWORD(1).EQ.1HS.OR.IIWORD(1).EQ.1H,.OR.
     1IIWORD(1).EQ.IEX)GO TO 3
      IJP=IJP+1
C  IKP=NUMBER OF WORDS IN SENTENCE
C  ********************************************************************
3     IF (IKP.NE.100) IKP=IKP+1
      ICLZ(IKP)=ICO
C  IF THIS IS NOT THE END OF A SENTENCE RETURN
C  ********************************************************************
4     IF (ICZ.NE.1)RETURN
5     IND=1
      IF (IKP.LT.1)GO TO 51
      CALL PARS
C  LOOP TO DELIMIT CLAUSE
C  ********************************************************************
C  ********************************************************************
```

```
      DO 40 I=1,IKP
C  WHEN THERE IS AN IF IN A CLAUSE, PUT REST OF WORDS IN SAME CLAUSE
C  ***************************************************************
      IF(ICLZ2(1,I),NE,2HIF)GO TO 274
      MLOC=I+1
      DO 2741 JM=MLOC,IKP
      IF(ICLZ2(1,JM),EQ,3HBUT)GO TO 40
 2741 CONTINUE
      GO TO 41
 2740 DO 10 J=1,12
      IF (ICLZ2(1,I),EQ,ICONJ(J)) GO TO 20
10    CONTINUE
      GO TO 40
C  REACH HERE WHEN HIT A CONJUNCTION
C  ***************************************************************
C  IF LESS THAN FOUR WORDS INCLUDING CONJUUNTION - NO CLAUSE
C  ***************************************************************
20    IF ((I-IND),LE,2)GO TO 40
C  IF CONJUNCTION LINKS DIRECTLY 2 VERBS, NO CLAUSE
C  ***************************************************************
      IF (IPART(IDESC(I-1,1)),EQ,4HVERB,AND,IPART(IDESC(I+1,1)),EQ,
     14HVERB)GO TO 40
C  IF COMMA AFTER CONJUNCTION, NEW CLAUSE
C  ***************************************************************
      IF(ICLZ2(1,I+1),EQ,1H,.OR.ICLZ2(1,I+2),EQ,1H,)GO TO 42
21    JJ=1
      IF                          (ICLZ2(1,I+JJ),EQ,3H---)JJ=JJ+1
C  IF WORD AFTER CONJ IS PRONOUN, NEW CLAUSE
C  ***************************************************************
      DO 25 J=1,41
      IF (ICLZ2(1,I+JJ),EQ.IPERS(J))GO TO 42
      IF(ICLZ2(1,I+1),EQ,3HNOW.OR,ICLZ2(1,I+1),EQ,4HTHEN,AND,ICLZ2(1,I+2
     1),EQ,IPERS(J))GO TO 42
25    CONTINUE
C  IF WORD AFTER CONJ IS DEMONSTRATIVE PRON, NEW CLAUSE
C  ***************************************************************
      DO 27 J=1,15
      IF (ICLZ2(1,I+JJ),EQ.IDEM(J))GO TO 42
      IF(ICLZ2(1,I+1),EQ,3HNOW.OR,ICLZ2(1,I+1),EQ,4HTHEN,AND,ICLZ2(1,I+2
     1),EQ,IDEM(J))GO TO 42
27    CONTINUE
28    IB=I
      LINE=1
C  THIS SECTION CHECKS FOR NOUN OR PRON AFTER CONJ
38    DO 29 K=IB,IKP
      DO 138 J=1,12
      IF (ICLZ2(1,K),EQ,ICONJ(J))GO TO 40
138   CONTINUE
      IF(IJ,EQ,1)GO TO 549
C  OVERLOOK CERTAIN CLIENT PHRASES
C  ***************************************************************
      IF (ICLZ2(1,K),EQ,1HI,AND,ICLZ2(1,K+1),EQ,4HMEAN)GO TO 43
      IF (ICLZ2(1,K),EQ,1HI,AND,ICLZ2(1,K+1),EQ,5HDON'T,AND,ICLZ2(1,K+2)
     1,EQ,4HKNOW)GO TO 44
      IF (ICLZ2(1,K),EQ,3HYOU,AND,ICLZ2(1,K+1),EQ,4HKNOW)GO TO 43
C  IF HIT ON OF EXCEPTION WORDS, NO NEW CLAUSE
```

```
C  ***********************************************************************
  549 DO 24 KKK=1,6
      IF (ICLZ2(1,K),EQ,IEXCP(KKK))GO TO 40
24    CONTINUE
      IF (IPART(IDESC(K,1)),EQ,4HNOUN,OR,IPART(IDESC(K,1)),EQ,4HPRON)GO
     1TO 36
29    CONTINUE
      GO TO 40
C  THIS SECTION CHECKS FOR VERB
C  ***********************************************************************
36    LINE=2
      IB=K+1
39    DO 37 K=IB,IKP
      DO 139 J=1,12
      IF (ICLZ2(1,K),EQ,ICONJ(J))GO TO 40
139   CONTINUE
C  ELIMINATE CERTAIN PHRASES
C  ***********************************************************************
      IF(IJ,EQ,1)GO TO 550
      IF (ICLZ2(1,K),EQ,1HI,AND,ICLZ2(1,K+1),EQ,4HMEAN)GO TO 43
      IF (ICLZ2(1,K),EQ,1HI,AND,ICLZ2(1,K+1),EQ,5HDON'T,AND,ICLZ2(1,K+2)
     1,EQ,4HKNOW)GO TO 44
      IF (ICLZ2(1,K),EQ,3HYOU,AND,ICLZ2(1,K+1),EQ,4HKNOW)GO TO 43
C  VERB FOUND - CHECK EXCEPTIONS
C  ***********************************************************************
  550 DO 124 KKK=1,6
      IF (ICLZ2(1,K),EQ,IEXCP(KKK))GO TO 40
124   CONTINUE
      IF (IPART(IDESC(K,1)),EQ,4HVERB)GO TO 42
37    CONTINUE
      GO TO 40
43    IB=K+2
      GO TO (38,39),LINE
44    IB=K+3
      GO TO (38,39),LINE
C  IF CLAUSE WOULD BE LESS THAN 3 WORDS IN LENGTH, NO CLAUSE
C  ***********************************************************************
42    IF ((IKP-I+1),LE,2)GO TO 40
C  IF THAT AFTER CONJ IS NOT FOLLOWED BY VERB OR ADVERB, NO CLAUSE
C  ***********************************************************************
      IF (ICLZ2(1,I+1),EQ,4HTHAT,AND,(IPART(IDESC(I+2,1)),NE,4HVERB,AND,
     1IPART(IDESC(I+2,1)),NE,3HADV))GO TO 40
      KK=I+1
C  CHECK PREVIOUS CLAUSE FOR NOUN OR PRONOUN
C  ***********************************************************************
      DO 45 K=IND,KK
      IF (IPART(IDESC(K,1)),EQ,4HNOUN,OR,IPART(IDESC(K,1)),EQ,4HPRON)
     1GO TO 46
      DO 145 L=1,41
      IF (ICLZ2(1,K),EQ,IPERS(L))GO TO 46
145   CONTINUE
45    CONTINUE
      GO TO 40
46    LL=K+1
C  CHECK PREVIOUS CLAUSE FOR VERB
      DO 47 K=LL,KK
```

```
      IF (IPART(IDESC(K,1)),EQ,4HVERB)GO TO 48
   47 CONTINUE
      GO TO 40
C  PRINT OUT CLAUSE NOT AT END OF SENTENCE
C  ***************************************************************
   48 KNT(IJ)=KNT(IJ)+1
      PRINT 9099
 9099 FORMAT (/1X,130(1H*))
      PRINT 35,KNT(IJ),IPER(IJ)
   35 FORMAT(/1X,5(1H*),' CLAUSE NO. ',I4,' FOR ',A8)
      CALL SQUEEZE(IND,I-1)
      CALL PERTNS(IND,I-1,IJ)
      CALL MDTPC(IND,I-1,IJ)
      IC=I-IND
      JC=IC
      IEP=0
      IK=I-1
      DO 1002 IQ=IND,IK
      ICO=ICLZ(IQ)
      DO 1001 JQ=1,12
      IF(ICLZ2(1,IQ),EQ,ISIMBOL(JQ))IC=IC-1
 1001 CONTINUE
      IF(ICLZ2(1,IQ),EQ,3H---)IC=IC-1
      IF(ICLZ2(1,IQ),NE,1H()GO TO 999
      IEP=1
      GO TO 1000
  999 IF(IEP,EQ,0)GO TO 1000
      IEP=IEP+1
      IF(ICLZ2(1,IQ),NE,1H))GO TO 1000
      IC=IC-IEP
      IEP=0
 1000 IF(IEP,NE,0)GO TO 1002
      IF(JC,NE,IC)GO TO 1003
      CALL ENDING(ICO,JJ)
      IF(LET(JJ),EQ,1H,,OR,LET(JJ),EQ,1H.,OR,LET(JJ),EQ,1HS)JJ=JJ+1
      NLR(IJ)=NLR(IJ)+JJ
      IF(JJ,GT,5)IBW(IJ)=IBW(IJ)+1
 1003 JC=IC
 1002 CONTINUE
      IF(MIN(IJ),GT,IC)MIN(IJ)=IC
      IF(MAX(IJ),LT,IC)MAX(IJ)=IC
      ITWD(IJ)=ITWD(IJ)+IC
      PRINT 151, IC
C  FOR COUNSELOR SEE WHAT TYPE OF RESPONSE IS
      IF (IJ,EQ,1)CALL COUNS(IND,I-1,IC)
      CALL SPOTTY(IJ)
      CALL MATRIX(IJ)
      IND=I
   40 CONTINUE
C  END OF LOOP TO DELIMIT CLAUSES
C  ***************************************************************
C  ***************************************************************
C  PRINT OUT CLAUSE AT END OF A SENTENCE
C  ***************************************************************
   41 KNT(IJ)=KNT(IJ)+1
      PRINT 9099
```

```
      PRINT 35,KNT(IJ),IPER(IJ)
50    FORMAT (3I5)
      CALL SQUEEZE(IND,IKP)
      CALL PERMS(IND,IKP,IJ)
      CALL MDTPC(IND,IKP,IJ)
      IC=IKP-IND+1
      JC=IC
      IEP=0
      DO 2002 IQ=IND,IKP
      ICQ=ICLZ(IQ)
      DO 2001 JQ=1,12
      IF(ICLZ2(1,IQ).EQ.ISIMROL(JQ))IC=IC-1
 2001 CONTINUE
      IF(ICLZ2(1,IQ).EQ.3H---)IC=IC-1
      IF(ICLZ2(1,IQ).NE.1H()GO TO 1999
      IEP=1
      GO TO 2000
 1999 IF(IEP.EQ.0)GO TO 2000
      IEP=IEP+1
      IF(ICLZ2(1,IQ).NE.1H))GO TO 2000
      IC=IC-IEP
      IEP=0
 2000 IF(IEP.NE.0)GO TO 2002
      IF(JC.NE.IC)GO TO 2003
      CALL ENDING(ICQ,JJ)
      IF(LET(JJ).EQ.1H.,OR.LET(JJ).EQ.1H,,OR.LET(JJ).EQ.1H$)JJ=JJ-1
      NLR(IJ)=NLR(IJ)+JJ
      IF(JJ.GT.5)IRW(IJ)=IRW(IJ)+1
 2003 JC=IC
 2002 CONTINUE
C  MIN=LENGTH OF SHORTEST CLAUSE
      IF(MIN(IJ).GT.IC)MIN(IJ)=IC
C  MAX=LENGTH OF LONGEST CLAUSE
      IF(MAX(IJ).LT.IC)MAX(IJ)=IC
C  TWD=TOTAL NUMBER OF WORDS USED BY SPEAKER IJ
      ITWD(IJ)=ITWD(IJ)+IC
      PRINT 151, IC
151   FORMAT (' NUMBER OF WORDS IN CLAUSE=',I5)
C  FOR COUNSELOR SEE WHAT TYPE OF RESPONSE IS
C  ************************************************************
      IF (IJ.EQ.2)GO TO 5003
      CALL COUNS(IND,IKP,IC)
      CALL SPOTTY(IJ)
      CALL MATRIX(IJ)
      GO TO 51
C  SAVE CLIENTS SENTENCE
 5003 CALL SPOTTY(IJ)
      CALL MATRIX(IJ)
      JKP=IKP
      DO 1004 I=1,JKP
      ISV(I)=ICLZ(I)
1004  CONTINUE
C  INITIALIZE AND RETURN
C  ************************************************************
51    IKP=0
      ICZ=0
```

```
      IJP=0
      RETURN
      END
```

```
      SUBROUTINE PERTNS(IB,IN,IJ)
C  IJ=1 FOR COUNSELOR, =2 FOR CLIENT
C  THIS SUBROUTINE ANALYZES A CLAUSE FOR PERSON AND TENSE
      COMMON/B/IPART(20),IDESC(101,2)
      COMMON/D/IPERPRON(8)
      COMMON/E/IPERS(60)
      COMMON/6/ ICPAR,ICO,IIWORD,ICLZ(100),LKP,ICLZ2(2,100),KP,KNT(4)
      COMMON/7/LET(16)
      COMMON/12/ITTPC(7,4),ICMBN(4),ICG(4),LAFF(4),IPS(4),ING(4),
     1IPRS(3,4),ITNS(3,4),NEUT(4),MPN(4),MAC(4)
      COMMON/13/IPR ITN,KPR,KTN
      COMMON /X/ JPR,JJPR,JTN,JJTN,JMODE,JJMODE,JVAL,JJVAL,JTP,JJTP,IX,
     1IY,JY,ITY,ISPOT(120,50),IAPH(14),NLR(4),IBW(4),IW(20)
      DIMENSION IIWORD(2),IEQVB(60),IPRES(20),IPAST(75),KVB(2)
     1,IPR(3),ITN(3),KPR(3),KTN(3),JKQ(5),IDEM(15)
      DOUBLE PRECISION ICLZ,ICO,JVB
      EQUIVALENCE(ICO,IIWORD),(ICLZ,ICLZ2),(JVB,KVB)
C  ************************************************************
      DATA(KVB(1)=8H        )
C  ************************************************************
      DATA(IEQVB=0,4HHAVE,2HAM,5HWOULD,4HWILL,0,4HWILL,4HHAVE,5HWOULD,
     13HARE,0,4HHAVE,3HARE,5HWOULD,4HWILL,
     1      0,2HIS,3HHAD,5HWOULD,4HWILL,0,2HIS,3HHAD,5HWOULD,4HWILL,0,2H
     2IS,3HHAD,5HWOULD,4HWILL,0,4HHAVE,3HARE,5HWOULD,3HHAD,4HWILL,4HWILL
     3,2HIS,0,2HIS,4HWILL)
C  ************************************************************
      DATA(IPRES=2HAM,3HARE,2HIS,2HDO,4HDOES,4HHAVE,3HHAS,2HGO,5HCOULD,
     15HWOULD,6HSHOULD)
      DATA(IPAST=3HWAS,4HWERE,3HDID,3HHAD,4HWENT,4HLEFT,4HCAME,5HWROTE,
     14HDONE,4HTOOK,7HBROUGHT,6HCAUGHT,3HSAW,3HRAN,3HGOT,4HBEEN,4HMADE,
     15HDRUNK,5HSTOLE,5HBUILT,4HFELT,4HSENT,4HSWAM,4HSANK,4HSUNK,5HFOUND
     3,4HKNEW,7HTHOUGHT,6HTAUGHT,4HPAID,4HGAVE,3HWAS,4HKEPT,4HSAID,
     45HMIGHT,4HFELT,5HHEARD,5HSPOKE,5HDROVE,4HHUNG,4HSANG,3HLIT,3HBIT,
     53HSAT,4HLAID,4HRODE,3HATE,5HDRANK)
C  ************************************************************
      DATA(JKQ=3HHOW,4HWHAT,5HWHERE,4HWHEN,3HWHY)
C  ************************************************************
      DATA(IDEM=2HIT,4HIT-S,5HIT-LL,4HIT-D,4HTHIS,4HTHAT,5HTHESE,5HTHOSE
     1,6HTHAT-S,7HTHIS-LL,7HTHAT-LL,6HTHAT-D,8HTHOSE-RE,8HTHESE-RE)
      DO 5 I=1,3
      KPR(I)=IPR(I)
      KTN(I)=ITN(I)
      IPR(I)=1H
5     ITN(I)=1H
C  CHECK FOR ARTICLE AS 1ST OR 2ND WORD
C  ************************************************************
      I=IB
      J=16
      IF(ICLZ2(1,IB).EQ.2HOR.OR.ICLZ2(1,IB).EQ.3HAND.OR.ICLZ2(1,IB).EQ.3
     1HBUT)I=I+1
      IF(ICLZ2(1,I).EQ.3HTHE.OR.ICLZ2(1,I).EQ.2HAN.OR.ICLZ2(1,I).EQ.1HA)
     1GO TO 30
      DO 707 K=1,14
      IF(ICLZ2(1,I).EQ.IDEM(K))GO TO 30
  707 CONTINUE
      DO 708 J=1,41
```

```
      IF(ICLZ2(1,I),EQ.IPERS(J))GO TO 30
  708 CONTINUE
C     CHECK FOR LET-S
C     ***************************************************************
      DO 7 I=IB,IN
      IF(ICLZ2(1,I),EQ.5HLET-S)GO TO 8
7     CONTINUE
      GO TO 9
8     IPR(2)=1H2
      ITN(2)=1H2
      GO TO 157
C     CHECK FOR QUESTION
C     ***************************************************************
    9 IBO=IB+1
      DO 500 I=IB,IBO
      ISTOP=0
      DO 505 K=1,41
      IF(ICLZ2(1,I+1),EQ.IPERS(K))ISTOP=1
  505 CONTINUE
      DO 500 J=1,5
      IF(ICLZ2(1,I),EQ.JKQ(J),AND.ISTOP.NE.1)GO TO 301
  500 CONTINUE
      CALL ENDING(ICLZ(IN),JJ)
      IF(LET(JJ).NE.1H$)GO TO 11
      II=IN-3
      DO 12 I=II,IN
      IF(ICLZ2(1,I),EQ.5HISN-T)GO TO 1
12    CONTINUE
C     CHECK FOR VERB FOLLOWED BY PRONOUN
C     ***************************************************************
  301 DO 13 I=IB,IN
      IF(IPART(IDESC(I,1)).NE.4HVERB)GO TO 13
C   VERB FOUND NOW CHECK PRONOUN
C     ***************************************************************
      II=I+1
      DO 14 J=II,IN
      DO 144 K=1,41
      IF(ICLZ2(1,J),EQ.IPERS(K))GO TO 15
144   CONTINUE
14    CONTINUE
      IPR(3)=1H3
C   PRONOUN FOUND FIND TENSE OF VERB
C     ***************************************************************
      GO TO 16
13    CONTINUE
      IPR(3)=1H3
      ITN(2)=1H2
C   DEFAULT CONDITION
C     ***************************************************************
      GO TO 157
   15 IF(K.LE.10)IPR(1)=1H1
      IF(K.GT.10.AND.K.LE.15)IPR(2)=1H2
      IF(K.GT.15)IPR(3)=1H3
16    IVB=ICLZ2(1,I)
      GO TO 95
C     CHECK FOR  IMPERATIVE
```

```
C  ***********************************************************************
11     II=0
       IF(ICLZ2(1,IB),EQ,6HPLEASE)GO TO 709
       IF(IPART(IDESC(IB,1)),EQ,4HCONJ)II=II+1
       IF(ICLZ2(1,IB+II),EQ,3HNOW.OR.ICLZ2(1,IB+II),EQ,6HALWAYS,OR,ICLZ2(
     11,IB+II),EQ,5HNEVER)II=II+1
       IF(IPART(IDESC(IB+II,1)),NE,4HVERB)GO TO 1
   709 IPR(2)=1H2
       ITN(2)=1H2
       GO TO 157
1      JB=IB
6      DO 20 I=IB,IN
C  CHECK FOR PRONOUN UNLESS IT IS PRECEEDED BY PREPOSITION OR VERB
C  ***********************************************************************
       DO 10 J=1,41
       IF (ICLZ2(1,I),EQ,IPERS(J),AND,IPART(IDESC(I-1,1)),NE,4HPREP,AND,I
      1PART(IDESC(I-1,1)),NE,4HVERB)GO TO 30
10     CONTINUE
20     CONTINUE
       IF ((IN-IB+1),LE,2)GO TO 147
       GO TO 70
30     JB=I+1
       IF(J,LE,10)GO TO 40
       IF(J,GT,15)GO TO 50
C  SECOND PERSON
C  ***********************************************************************
       IF (J,EQ,11,AND,ICLZ2(1,I+1),EQ,4HKNOW)GO TO 20
       IPR(2)=1H2
       GO TO 60
C  FIRST PERSON
C  ***********************************************************************
40     IF (J,NE,1)GO TO 45
       IF(IJ,EQ,1)GO TO 45
       JLM=I-1
       IF (ICLZ2(1,I+1),EQ,4HMEAN)GO TO 310
       IF (ICLZ2(1,I+1),EQ,5HTHINK)GO TO 310
       IF (ICLZ2(1,I+1),EQ,5HGUESS)GO TO 310
       IF (ICLZ2(1,I+1),EQ,5HDON-T,AND,ICLZ2(1,I+2),EQ,4HKNOW)GO TO 309
       GO TO 45
   309 JLM=JLM+1
   310 JLM=JLM+1
       IF(ICLZ2(1,JLM),EQ,2HIF,OR,ICLZ2(1,JLM),EQ,7HWHETHER,OR,ICLZ2(1,JL
      1M),EQ,5HABOUT,OR,ICLZ2(1,JLM),EQ,4HWHAT)GO TO 45
       DO 305 JG=1,5
       IF(ICLZ2(1,JLM),EQ,JKQ(JG))GO TO 45
   305 CONTINUE
       GO TO 20
45     IPR(1)=1H1
       GO TO 60
C  THIRD PERSON
C  ***********************************************************************
50     IPR(3)=1H3
60     IVB=IEQVB(J)
       IF (IVB,NE,0)GO TO 95
C  FIND VERB OF CLAUSE
C  ***********************************************************************
```

```
70      DO 80 I=JB,IN
        IF (IPART(IDESC(I,1)),EQ.4HVERB)GO TO 90
80      CONTINUE
        GO TO 145
C   DO NOT LOOK AT INFINITIVES
C   ***************************************************************
90      IF (IPART(IDESC(I-1,1)),EQ.3HINF)GO TO 80
        IVB=ICLZ2(1,I)
C   CHECK FOR PAST
C   ***************************************************************
95      DO 800 KEP=1,48
        IF(IVB.EQ.IPAST(KEP))GO TO 155
  800 CONTINUE
C   CHECK FOR FUTURE
C   ***************************************************************
        IF (IVB.EQ.5HSHALL.OR.IVB.EQ.4HWILL.OR.IVB.EQ.6HSHAN-T.OR.IVB.EQ.
       15HWON-T) GO TO 140
C   CHECK FOR PRESENT
C   ***************************************************************
        DO 100 L=1,11
        IF (IVB.EQ.IPRES(L))GO TO 120
100     CONTINUE
        KVB(1)=IVB
C   STRIP CONTRACTIONS OFF
C   ***************************************************************
        CALL ENDING(JVB    ,JJ)
        CALL PART(JJ-2,JJ,JVB)
        IF(KVB(1).NE.3HN-T)GO TO 115
        CALL PART(1,JJ-3,JVB)
        IVB=KVB(1)
        GO TO 95
C   CHECK FOR ED ENDING
115     CALL PART(JJ-1,JJ,JVB)
        IF(KVB(1).EQ.2HED) GO TO 135
        GO TO 147
120     IF (L.GT.3)GO TO 130
C   CHECK FOR FUTURE
C   ***************************************************************
        IF (ICLZ2(1,I+1).EQ.5HGOING.OR.ICLZ2(1,I+2).EQ.5HGOING)GO TO 140
        IF (ICLZ2(1,I+1).EQ.8HPLANNING.OR.ICLZ2(1,I+2).EQ.8HPLANNING)
       1GO TO 140
        GO TO 145
130     IF (L.LT.9)GO TO 145
C   CHECK FOR PAST
C   ***************************************************************
        IF (ICLZ2(1,I+1).EQ.4HHAVE.AND.IPART(IDESC(I+2,1)).EQ.4HVERB)
       1GO TO 135
        IF (ICLZ2(1,I+2).EQ.4HHAVE.AND.IPART(IDESC(I+3,1)).EQ.4HVERB)
       1GO TO 135
        GO TO 150
C   PAST
C   ***************************************************************
135     ITN(1)=1H1
        GO TO 150
C   FUTURE
C   ***************************************************************
```

```
      ITN(3)=1H3
      GO TO 150
C  PRESENT
C  ************************************************************
145   ITN(2)=1H2
      GO TO 150
C  FOR MM, NO, OR YES TAKE PERSON AND TENSE FROM PREVIOUS CLAUSE
C  ************************************************************
147   IF (ICLZ2(1,IB).EQ.2HMM.OR.ICLZ2(1,IB).EQ.3HMM..OR.ICLZ2(1,IB).EQ.
     12HNO.OR.ICLZ2(1,IB).EQ.3HYES)GO TO 180
150   DO 156 J=1,3
      IF (IPR(J).NE.1H )GO TO 257
156   CONTINUE
      IPR(3)=1H3
257   DO 258 J=1,3
      IF (ITN(J).NE.1H )GO TO 157
258   CONTINUE
      ITN(2)=1H2
C  PRINT OUT PERSON AND TENSE
C  ************************************************************
157   IF(IPR(3).EQ.1H3)JPR=5HTHIRD
      IF(IPR(2).EQ.1H2)JPR=6HSECOND
      IF(IPR(1).EQ.1H1)JPR=5HFIRST
      IF(ITN(2).EQ.1H2)JTN=7HPRESENT
      IF(ITN(1).EQ.1H1)JTN=4HPAST
      IF(ITN(3).EQ.1H3)JTN=6HFUTURE
      PRINT 160,JPR
160   FORMAT (1X,*PERSON  =    *,A8)
      PRINT 170,JTN
170   FORMAT(1X,*TENSE    =    *,A8)
      IF(JPR.EQ.5HFIRST)IPRS(1,IJ)=IPRS(1,IJ)+1
      IF(JPR.EQ.6HSECOND)IPRS(2,IJ)=IPRS(2,IJ)+1
      IF(JPR.EQ.5HTHIRD)IPRS(3,IJ)=IPRS(3,IJ)+1
      IF(JTN.EQ.4HPAST)ITNS(1,IJ)=ITNS(1,IJ)+1
      IF(JTN.EQ.7HPRESENT)ITNS(2,IJ)=ITNS(2,IJ)+1
      IF(JTN.EQ.6HFUTURE)ITNS(3,IJ)=ITNS(3,IJ)+1
      RETURN
C  PUT IN PERSON AND TENSE CALCULATED FROM PREVIOUS CLAUSE
C  ************************************************************
180   DO 182 I=1,3
182   ITN (I)=KTN(I)
      IF (KPR(1).NE.1H )IPR(2)=1H2
      IF (KPR(2).NE.1H )IPR(1)=1H1
      DO 181 I=1,2
      IF (IPR(I).NE.1H )GO TO 157
181   CONTINUE
      IPR(3)=1H3
      GO TO 157
      END
```

```
      SUBROUTINE PARS
      DIMENSION IART(3), IPERPRON(8), IWORD(2), IPREP(50), ICONJ(15), IH
     1ELP(25), JWORD(2), ITOBE(10), IHAVE(10), IPRON(10), IADV(40), IPRA
     2DJ(7), NUM(10), LET(16), NUMBR(20), IADJ(10), JSAV(2), IVER(50)
      COMMON /B/ IPART(20), IDESC(10,2)
      COMMON /D/ IPERPRON
      COMMON /G/ ICPAR, ICO, IWORD, ICLZ(100), IKP, ICLZ2(2,100), KPPP, KNT(4)
      COMMON /7/ LET
      COMMON /8/ ITAPE, IREPT, IKEY, ISYMBL, IKEY2, IKEY3, K1, K2, KT(6)
      DOUBLE PRECISION ICO, ISAV, KWORD, ICLZ
      EQUIVALENCE (ICO, IWORD), (KWORD, JWORD), (ICLZ, ICLZ2), (ISAV, JSAV)
      DATA (IART=1HA, 2HAN, 3HTHE)(IPERPRON=1HI, 2HWE, 3HYOU, 2HHE, 3HSHE, 2HIT
     1    ,4HTHEY)(IPREP=     2HBY, 3HFOR, 2HAT, 2HIN, 4HWITH, 2HOF, 2HON,
     24HFROM, 4HINTO, 3HPRO, 4HONTO, 7HBETWEEN, 5HAFTER, 5HUNDER, 6HBEFORE,
     37HTHROUGH, 5HUNDER, 4HOVER, 7HAGAINST, 6HACROSS, 5HAMONG, 5HABOUT,
     46HDURING, 6HTOWARD)
     4(ICONJ=3HAND, 2HOR, 3HNOR, 3HBUT, 6HEITHER, 7HNEITHER, 7HBECAUSE,
     47HWHETHER, 2HIF, 6HTHOUGH, 4HTHAN)
     4(IHELP=3HCAN, 2HDO, 4HDOES, 3HDID, 5HSHALL, 6HSHOULD, 4HMUST, 3HMAY,
     55HCOULD, 5HCAN-T, 6HCANNOT, 8HCOULDN-T, 4HWILL, 5HWOULD, 8HWOULDN-T,
     57HDOESN-T, 5HDON-T, 6HDIDN-T, 5HWON-T
     6)(ITOBE=4HBEEN,
     6 2HBE,  2HAM, 3HARE, 2HIS, 3HWAS, 4HWERE)(IHAVE=4HHAVE, 3HHAS, 3HHAD)
     4(IADJ=4HEACH, 3HALL, 5HEVERY)
     2(NUMBR=4HZERO, 3HONE, 3HTWO, 5HTHREE, 4HFOUR, 4HFIVE, 3HSIX, 5HSEVEN,
     35HEIGHT, 4HNINE, 3HTEN)
     7(IPRON=3HWHO, 4HWHOM, 4HWHAT, 2HME, 3HHIM, 3HHER, 2HUS, 4HTHEM)
     8(IADV=5HWHERE, 4HWHEN, 3HWHY, 5HNEVER, 4HVERY, 3HTOO, 3HNOT, 7HPERHAPS,
     83HNOW, 6HALWAYS, 5HOFTEN, 6HALMOST, 4HEVER, 7HALREADY, 4HTHEN, 6HBEHIND,
     83HYET, 4HHERE, 5HTHERE, 4HSOON, 6HRATHER, 4HALSO)
     8                              (IPRADJ=2HMY, 4HYOUR, 3HHIS      3HITS,
     93HOUR, 5HTHEIR) (IPART=3HART, 4HPRON, 4HPREP, 4HCONJ, 4HVERB, 4HVERB,
     1 4HVERB, 4HPRON, 3HADV, 4HNOUN, 3HADJ, 4HVERB,  4HPRON, 4HINFIN, 4HVERB)
      DATA(IVER=3HTRY, 7HIMAGINE, 3HSAY, 2HDO, 4HTELL, 7HPRETEND, 7HSUPPOSE,
     14HLOOK, 4HPICK, 4HSTAY, 3HSEE, 5HTHINK, 6HDECIDE, 4HHELP, 4HTALK, 3HPUT,
     12HGO, 4HCOME, 8HDEVELOPE, 4HGROW, 3HTRY, 8HREMEMBER, 5HDON-T, 4HMIND,
     14HMAKE, 6HLISTEN, 6HFOLLOW, 3HGET, 2HBE, 8HEXAGERAT, 8HEMBARRAS)
C     CODES FOR IDESC = 1=ARTICLE,2=PERSONAL PRONOUN,3=PREP,4=CONJ,5=AUX
C        VERB,6=VERB TO BE,7=VERB TO HAVE,8=PRONOUN,9=ADVERB,10=NOUN,
C        11=ADJECTIVE,12=VERB,13=POSSESSIVE PRONOUN,14=INFINITIVE
C        15=VERB
C     2ND PART OF IDESC=1 WHEN WORD IS DEFINITELY CODED(I.E. FROM DICTIO
C        Y) OR AT END OF SENTENCE
C     THIS LOOP CHECKS SPECIFIC DICTIONARIES
      DO 125 I=1,IKP
      ICO=ICLZ(I)
      DO 5 J=1,2
    5 IDESC(I,J)=0
      IDESC(IKP+1,2)=1
      NUM(I)=0
C     ARTICLES
      DO 10 IP=1,3
      IF (IWORD(1).EQ.IART(IP)) GO TO 80
   10 CONTINUE
C     PERSONAL PRONOUNS
      DO 15 IP=1,7
```

```
      IF (IWORD(1).EQ.IPERPRON(IP)) GO TO 65
   15 CONTINUE
C     PREPOSITIONS
      DO 20 IP=1,24
      IF (IWORD(1).EQ.IPREP(IP)) GO TO 95
   20 CONTINUE
C     CONJUNCTIONS
      DO 25 IP=1,11
      IF (IWORD(1).EQ.ICONJ(IP)) GO TO 100
   25 CONTINUE
C     AUXILIARY VERBS
      DO 30 IP=1,19
      IF (IWORD(1).EQ.IHELP(IP)) GO TO 85
   30 CONTINUE
C     VERB TO BE
      DO 35 IP=1,7
      IF (IWORD(1).EQ.ITOBE(IP)) GO TO 70
   35 CONTINUE
C     VERB TO HAVE
      DO 40 IP=1,3
      IF (IWORD(1).EQ.IHAVE(IP)) GO TO 75
   40 CONTINUE
C     OTHER PRONOUNS
      DO 45 IP=1,8
      IF (IWORD(1).EQ.IPRON(IP)) GO TO 115
   45 CONTINUE
C     ADVERBS
      DO 50 IP=1,22
      IF (IWORD(1).EQ.IADV(IP)) GO TO 90
   50 CONTINUE
C     POSSESSIVE PRONOUNS
      DO 55 IP=1,6
      IF (IWORD(1).EQ.IPRADJ(IP)) GO TO 105
   55 CONTINUE
C     ADJECTIVES
      DO 60 IP=1,3
      IF (IWORD(1).EQ.IADJ(IP)) GO TO 110
   60 CONTINUE
C  VERBS
      DO 61 IP=1,31
      IF (IWORD(1).EQ.IVER(IP))GO TO 111
   61 CONTINUE
      GO TO 125
   65 IDESC(I,1)=2
      GO TO 120
   70 IDESC(I,1)=6
      GO TO 120
   75 IDESC(I,1)=7
      GO TO 120
   80 IDESC(I,1)=1
      GO TO 120
   85 IDESC(I,1)=5
      GO TO 120
   90 IDESC(I,1)=9
      GO TO 120
   95 IDESC(I,1)=3
```

```
      GO TO 120
  100 IDESC(I,1)=4
      GO TO 120
  105 IDESC(I,1)=13
      GO TO 120
  110 IDESC(I,1)=11
      GO TO 120
  111 IDESC(I,1)=15
      GO TO 120
  115 IDESC(I,1)=8
  120 IDESC(I,2)=1
      NUM(I)=1
  125 CONTINUE
      DO 215 I=1,IKP
      IF (IDESC(I,2).EQ.1) GO TO 215
C     ENDING SEPARATES WORD INTO ITS LETTERS
      CALL ENDING (ICLZ(I),JJ)
C     PART GROUPS CERTAIN SETS OF LETTERS TOGETHER
      CALL PART (JJ-1,JJ,ISAV)
C     LY ENDING IS ADVERB
      IF(JSAV(1).EQ.2HLY) GO TO 160
      CALL PART (JJ-3,JJ,ISAV)
      LPART=JSAV(1)
C     SELF ENDING IS PRONOUN
      IF (LPART.EQ.4HSELF) GO TO 150
C     TION AND NESS ENDINGS ARE NOUNS
      IF (LPART.EQ.4HTION.OR.LPART.EQ.4HNESS) GO TO 180
C     ABLE ENDING IS ADJECTIVE
      IF (LPART.EQ.4HABLE) GO TO 175
      CALL PART (JJ-2,JJ,ISAV)
      LPART=JSAV(1)
C     FUL ENDING IS ADJECTIVE
      IF (LPART.EQ.3HFUL) GO TO 175
C     ISM ENDING IS NOUN
      IF (LPART.EQ.3HISM) GO TO 180
      CALL PART (JJ-4,JJ,ISAV)
      LPART=JSAV(1)
C     THING OR TIONS ENDING IS NOUN
      IF (LPART.EQ.5HTHING.OR.LPART.EQ.5HTIONS) GO TO 180
C     SPECIAL TREATMENT OF WORD TO
      IF (ICLZ2(1,I).EQ.2HTO) GO TO 195
      ICO=ICLZ(I)
C     NUMBERS
      DO 130 IP=1,11
      IF (IWORD(1).EQ.NUMBR(IP)) GO TO 135
  130 CONTINUE
      IF (IDESC(I-1,1).EQ.1.OR.IDESC(I-1,1).EQ.13) GO TO 165
      IF (IDESC(I-1,1).EQ.5.OR.IDESC(I-1,1).EQ.2) GO TO 185
      IF (IDESC(I-1,1).EQ.3) GO TO 190
      IF (IDESC(I-1,1).EQ.6.OR.IDESC(I-2,1).EQ.6) GO TO 140
      IF (IDESC(I-1,1).EQ.7.OR.IDESC(I-2,1).EQ.7) GO TO 145
      IF (IDESC(I-1,1).EQ.9.AND.(IDESC(I-2,1).EQ.5.OR.IDESC(I-2,1).EQ.12
     1)) GO TO 185
      IF (IPART(IDESC(I+2,1)).EQ.4HVERB) GO TO 155
      IF (IPART(IDESC(I+1,1)).EQ.4HVERB) GO TO 180
      GO TO 215
```

```
C       FOR PREP AFTER NUMBER, NUMBER IS NOUN
  135   IF (IDESC(I+1,1).EQ.3) GO TO 180
        IF (NUM(I+1).EQ.0) GO TO 170
        GO TO 215
  140   CALL PART (JJ-2,JJ,ISAV)
        IF (JSAV(1).EQ.3HING.OR.LET(JJ).EQ.1HT) GO TO 185
        CALL PART (JJ-1,JJ,ISAV)
        IF (JSAV(1).EQ.2HED) GO TO 175
        GO TO 215
  145   IF (LET(JJ).EQ.1HT) GO TO 185
        IF (LET(JJ).EQ.1HD.OR.LET(JJ).EQ.1HN) GO TO 185
        GO TO 215
C       PRONOUN
  150   NUM(I)=NUM(I)+1
        IDESC(I,1)=8
        GO TO 215
  155   IF (NUM(I+1)) 215,170,215
C       ADVERB
  160   NUM(I)=NUM(I)+1
        IDESC(I,1)=9
        GO TO 215
  165   IF (IDESC(I+1,2).EQ.1) GO TO 180
        CALL ENDING(ICLZ(I+1),JJ)
        IF (LET(JJ).NE.1HD.OR.LET(JJ-1).NE.1HE)GO TO 170
        NUM(I+1)=NUM(I+1)+1
        IDESC(I+1,1)=12
        GO TO 180
C       ADJECTIVE AND NOUN
  170   NUM(I)=NUM(I)+1
        IDESC(I,1)=11
        NUM(I+1)=NUM(I+1)+1
        IDESC(I+1,1)=10
        GO TO 215
C       ADJECTIVE
  175   NUM(I)=NUM(I)+1
        IDESC(I,1)=11
        GO TO 215
C       NOUN
  180   NUM(I)=NUM(I)+1
        IDESC(I,1)=10
        GO TO 215
  185   NUM(I)=NUM(I)+1
        IDESC(I,1)=12
        GO TO 215
  190   IF (IDESC(I+1,2).EQ.1.OR.ICLZ2(1,I+1).EQ.2HTO) GO TO 180
        GO TO 170
C       FOR WORD TO = IF FOLLOWING WORD IS IN DICTIONARY, GO TO 507
C          IF 2 WORDS FOLLOWING TO ARE NOT IN DICTIONARY GO TO 506(PREPOSI
  195   IF (IDESC(I+1,2).EQ.1) GO TO 205
        IF (IDESC(I+2,2).NE.1) GO TO 210
C       UNKNOWN AFTER TO, THEN KNOWN = CALL UNKNOWN VERB AND INFINITIVE
        NUM(I)=1
        NUM(I+1)=NUM(I+1)+1
        IDESC(I+1,1)=12
C       INFINITIVE
  200   IDESC(I,1)=14
```

```
      IDESC(I,2)=1
      GO TO 215
C     FOR WORD TO + IF WORD AFTER IT IS KNOWN, CALL IT INFINITIVE
  205 IF (IDESC(I+1,1).GE.5.AND.IDESC(I+1,1).LE.7) GO TO 200
C     IF NOT VERB, PROBABLY IS PRONOUN , SO CALL PREPOSITION
  210 NUM(I)=1
      IDESC(I,1)=3
      IDESC(I,2)=1
  215 CONTINUE
      DO 275 I=1,IKP
      IF (IDESC(I,1).EQ.10.AND.IDESC(I+1,1).EQ.10) IDESC(I,1)=1
      IF (IDESC(I,2).EQ.1.OR.NUM(I).NE.0) GO TO 260
      IF (IDESC(I+1,1).EQ.3.OR.ICLZ2(1,I+1).EQ.2HTO) GO TO 255
      IF (NUM(I+1).EQ.0.AND.IDESC(I+2,1).EQ.3) GO TO 235
      DO 220 IP=1,11
      IF (IWORD(1).EQ.NUMBR(IP)) GO TO 235
  220 CONTINUE
      IF (ICLZ(I+1).EQ.3HHER) GO TO 230
      IF (IDESC(I-1,1).EQ.9.AND.IDESC(I-2,1).EQ.1.AND.NUM(I+1).EQ.0) GO
     1TO 235
      IF (IDESC(I-1,1).EQ.12.AND.I.GE.(IKP-1)) GO TO 230
      DO 225 J=1,3
      IF (ICLZ2(1,I-1).EQ.ICONJ(J)) GO TO 240
  225 CONTINUE
      IF (IDESC(I-1,1).EQ.6.OR.IDESC(I-2,1).EQ.6.OR.IDESC(I-3,1).EQ.6) G
     1O TO 250
      GO TO 260
  230 IF (NUM(I+1)) 231,231,255
231   CALL ENDING(ICLZ(I+1),JJ)
      IF (LET(JJ).NE.1HD.OR.LET(JJ-1).NE.1HE)GO TO 235
      NUM(I+1)=NUM(I+1)+1
      IDESC(I+1,1)=12
      GO TO 255
  235 NUM(I)=1
      IDESC(I,1)=11
      NUM(I+1)=1
      IDESC(I+1,1)=10
      GO TO 260
  240 IF (NUM(I+1).EQ.0) GO TO 245
      IF (NUM(I-2).EQ.0) GO TO 260
      NUM(I)=1
      IDESC(I,1)=IDESC(I-2,1)
      GO TO 260
  245 NUM(I)=1
      IF (NUM(I-3).EQ.0.OR.NUM(I-2).EQ.0) GO TO 260
      IDESC(I,1)=IDESC(I-3,1)
      NUM(I+1)=1
      IDESC(I+1,1)=IDESC(I-2,1)
      GO TO 260
  250 NUM(I)=1
      IDESC(I,1)=11
      GO TO 260
  255 NUM(I)=1
      IDESC(I,1)=10
260   IF (ITAPE.NE.6.AND.ITAPE.NE.5)GO TO 275
      IF (ITAPE.EQ.6.AND.IPART(IDESC(I,1)).NE.4HNOUN.AND.IPART(IDESC(I,1
```

```
     1)),NE,4HVERB) GO TO 275
      PRINT 270, ICLZ2(1,I),ICLZ2(2,I)
      PRINT 265, IPART(IDESC(1,1))
      IF (NUM(I).NE.0) ICPAR=ICPAR+1
      GO TO 275
  265 FORMAT (1H+,16X,  5H  -  ,A8/)
  270 FORMAT (/1H+,2A8)
  275 CONTINUE
      DO 276 I=1,IKP
      IF (ICLZ2(1,I),NE,1H()GO TO 276
      IDESC(I,1)=20
      IDESC(I+1,1)=20
      IDESC(I+2,1)=8
  276 CONTINUE
      RETURN
      END
```

```
      SUBROUTINE COUNS(IB,IN,IC)
C  THIS SUBROUTINE CLASSIFIES A COUNSELOR CLAUSE RESPONCE.
C  IB=1ST WORD IN CLAUSE
C  IN=LAST WORD IN CLAUSE
C  IC=NUMBER OF WORDS IN CLAUSE
      DIMENSION IRSP(20),MSS(40),IABLE(10),ICON(10),IDEM(10)
      COMMON/6/ ICPAR,ICO,IIWORD(2),ICLZ(100),IKP,ICLZ2(2,100),KP,KNT(4)
      COMMON/7/LET(16)
      COMMON/13/IPR(3),ITN(3),KPR(3),KTN(3)
      COMMON/14/JKP,ISV(100),ICOUN(20)
      COMMON/8/IPART(20),IDESC(10,2)
      COMMON/E/IPERS(60)
      COMMON /X/ JPR,JJPR,JTN,JJTN,JMODE,JJMODE,JVAL,JJVAL,JTP,JJTP,IX,
     1IY,JY,ITY,ISPOT(120,50),IAPH(14),NLR(4),IBW(4),IW(20)
      DOUBLE PRECISION ICO,ISV,ICLZ
      EQUIVALENCE (ICO,IIWORD),(ICLZ,ICLZ2)
C  ********************************************************************
      DATA(ICONE=3HBUT,2HOR,3HYET,7HHOWEVER,8HNEVERTHE)
C  ********************************************************************
      DATA(IABLE=5HCOULD,3HCAN,5HWOULD,4HWILL,5HMIGHT,3HMAY)
C  ********************************************************************
      DATA(IEX=1H*)
C  ********************************************************************
      DATA(IRSP=8HM, S, S,,6HACCENT,8HRESTATE,,8HREFL,SIM,8HREFL,CON,
     16HREFL,CAU,7HINFORM,,8HIMPERAT,,7HPROBE-S,8HPROBE-M,8HABIL-POT,
     28HSELF-REF,8HJOINT-IM,8H3RD-PERS)
C  ********************************************************************
      DATA(MSS=5HMM-MM,6HUH-HUH,2HOK,3HYES,5HRIGHT,2HMM,4HGOOD,4HFINE,
     14HWELL,2HON,3HYEH,2HYA,5HHELLO,2HNO,5HMAYBE)
C  ********************************************************************
      DATA(IDEM=2HIT,4HIT-S,5HIT-LL,4HIT-D,4HTHIS,4HTHAT,5HTHESE,5HTHOSE
     1,6HTHAT-S,7HTHIS-LL,7HTHAT-LL,6HTHAT-D,8HTHOSE-RE,8HTHESE-RE)
C  ********************************************************************
      IIWORD(2)=8H
C  CHECK FOR SIMPLE PROBE
C  ********************************************************************
      IF (ICLZ2(1,IN),EQ,1HS)GO TO 21
      CALL ENDING(ICLZ(IN),KK)
      IF (LET(KK),EQ,1HS)GO TO 21
C  CHECK MIN, SOC, STIM,
C  ********************************************************************
      IF (IC,GT,1)GO TO 30
      IIWORD(1)=ICLZ2(1,IB)
      CALL ENDING(ICLZ(IB),KK)
      IF (LET(KK),NE,1H,,AND,LET(KK),NE,1HX,AND,LET(KK),NE,1H,)GO TO 10
      CALL PART(1,KK-1,IIWORD(1))
10    DO 20 I=1,15
      IF (IIWORD(1),EQ,MSS(I))GO TO 210
20    CONTINUE
      GO TO 30
C  CHECK FOR PROBE - RHETORICAL
C  ********************************************************************
21    IF (ICLZ2(1,IB),EQ,5HISN-T,AND,ICLZ2(1,IB+1),EQ,2HII)GO TO 300
      IF (ICLZ2(1,IB),EQ,5HDON-T,AND,ICLZ2(1,IB+1),EQ,3HYOU)GO TO 300
      IF (ICLZ2(1,IB),EQ,2HDO,AND,ICLZ2(1,IB+1),EQ,3HYOU,AND,ICLZ2(1,IB
     1+2),EQ,3HNOT)GO TO 300
```

```
      IF ((ICLZ2(1,IN-1).EQ.5HDOES.OR.ICLZ2(1,IN-1).EQ.7HDOESN'T).AND.
     1IPART(IDESC(IN,1)).EQ.4HPREP)GO TO 300
      GO TO 290
C  CHECK JOINT IMPERATIVE
C  ***********************************************************
   30 DO 31 I=IB,IN
      IF(ICLZ2(1,I).EQ.5HLET'S)GO TO 330
      IF(ICLZ2(1,I).EQ.3HLET.AND.ICLZ2(1,I+1).EQ.2HUS.OR.ICLZ2(1,I+1).EQ
     1.2HUS)GO TO 330
31    CONTINUE
      IF (IPART(IDESC(IB,1)).EQ.4HVERB.OR.ICLZ2(1,IB).EQ.8HPLEASE)GO TO
     1280
C  CHECK FOR ACCENT
C  ***********************************************************
      DO 50 I=1,JKP
      IF (ISV(I).NE.ICLZ(IB))GO TO 50
      K=0
      DO 40 J=IB,IN
      IF (ISV(I+K).NE.ICLZ(J))GO TO 50
      K=K+1
40    CONTINUE
      GO TO 220
50    CONTINUE
      IF (IC.EQ.1) GO TO 210
      ICN=0
C  CHECK RESTATE.
C  ***********************************************************
      DO 80 I=IB,IN
      DO 60 J=1,JKP
      IF (ISV(J).EQ.ICLZ(I))GO TO 70
60    CONTINUE
      GO TO 80
70    ICN=ICN+1
80    CONTINUE
      R=FLOATF(ICN)/FLOATF(IC)
      IF(R.GT.0.6)GO TO 230
C  CHECK FOR INFORMATIONAL
C  ***********************************************************
      IBB=IB+4
      IF(IN.LE.5)IBB=IN-1
C  CHECK FOR ABILITY POTENTIAL
C  ***********************************************************
      DO 100 I=IB,IBB
      DO 100 J=1,6
      IF(ICLZ2(1,I).EQ. 2HWE.AND.ICLZ2(1,I+1).EQ.IABLE(J))GO TO 310
      IF(ICLZ2(1,I).EQ.3HYOU.AND.ICLZ2(1,I+1).EQ.IABLE(J))GO TO 310
  100 CONTINUE
C  CHECK 1ST 5 WORDS FOR PRONOUN
C  ***********************************************************
      DO 170 J=1,41
      IF (ICLZ2(1,I).EQ.IPERS(J).AND.IPART(IDESC(I+1,1)).NE.4HPREP.AND.I
     1PART(IDESC(I+1,1)).NE.4HVERB)GO TO 171
  171 CONTINUE
      DO 170 J=1,14
      IF (ICLZ2(1,I).EQ.IDEM(J))GO TO 270
  170 CONTINUE
```

```
180   CONTINUE
C  REACHES HERE IF NO PRONOUN FOUND
C  ***************************************************************
      GO TO 131
C  CHECK SIMPLE REFLECTION
C  ***************************************************************
  181 IF(J.LE.10)GO TO 320
      IF(J.GT.15.AND.J.LE.25)GO TO 200
      IF(J.GT.25.AND.J.LE.30)GO TO 270
      IF(J.GT.30.AND.J.LE.36)GO TO 200
      IF(J.GT.36)GO TO 270
C  CHECK CONFRONTING REFLECTION
C  ***************************************************************
      DO 150 I=1,5
      IF (ICLZ2(1,IB),EQ,ICONF(I))GO TO 250
150   CONTINUE
C  CHECK CAUSATIVE REFLECTION
C  ***************************************************************
      IF  ICLZ2(1,IB),EQ,2HSO,OR,ICLZ2(1,IB+1),EQ,2HSO)GO TO 260
      DO  60 I=IB,IN
      IF (ICLZ2(1,I),EQ,7HBECAUSE,OR,ICLZ2(1,I),EQ,8HTHEREFOR)GO TO 260
160   CONTINUE
      GO TO 240
  131 IF(JPR.EQ.5HTHIRD)GO TO 270
      IF(JPR.EQ.5HFIRST)GO TO 320
      IF(JPR.EQ.6HSECOND)GO TO 240
C  END CLASSIFICATION SEARCH
C  ***************************************************************
C  THIRD PERSON INFORMATION
200   ITY=14
      GO TO 340
C  MINIMAL SOCIAL STIMULUS
210   ITY=1
      GO TO 340
C  ACCENT
220   ITY=2
      GO TO 340
C  RESTATEMENT
230   ITY=3
      GO TO 340
C  SIMPLE REFLECTION
240   ITY=4
      GO TO 340
C  CONFRONTING REFLECTION
250   ITY=5
      GO TO 340
C  CAUSATIVE REFLECTION
260   ITY=6
      GO TO 340
C  INFORMATIONAL
270   ITY=7
      GO TO 340
C  IMPERATIVE
280   ITY=8
      GO TO 340
C  PROBE
```

```
290   ITY=9
      GO TO 340
C  RHETORICAL QUESTION
300   ITY=10
      GO TO 340
C  ABILITY POTENTIAL
310   ITY=11
      GO TO 340
C  SELF REFERENCE
  320 DO 500 J=I,IN
      IF(ICLZ2(1,J).EQ.4HHEAR.OR.ICLZ2(1,J).EQ.5HHEARD.OR.ICLZ2(1,J).EQ.
     15HSENSE)GO TO 240
  500 CONTINUE
      ITY=12
      GO TO 340
C  JOINT IMPERATIVE
330   ITY=13
340   PRINT 9050,IRSP(ITY)
 9050 FORMAT (* TYPE OF RESPONSE = *,A8)
C  ICOUN=TOTAL FOR COUNSELOR TYPE OF RESPONCE
C  **********************************************************************
      ICOUN(ITY)=ICOUN(ITY)+1
      IW(ITY)=IW(ITY)+IC
      RETURN
      END
```

```
      SUBROUTINE SQUEEZE(I,J)
C  THIS PROGRAM PRINTS OUT A SET OF WORDS IN ARRAY ICLZ FROM WORD I TO J.
C        IT SPACES THE ACTUAL REAL WORDS WITH ONE SPACE BETWEEN THEM.
      DIMENSION ICHAR(1600),KHAR(1600),IIWORD(2)
      COMMON /6/ ICPAR,ICO,IIWORD,ICLZ(100),IKP,ICLZ2(2,100),KP,KNT(4)
      DOUBLE PRECISION ICLZ,ICO
      EQUIVALENCE (ICO,IIWORD),(ICLZ,ICLZ2)
      L1=1
      DO 20 K=I,J,8
      IND=K+7
      IF (IND.GT.J) IND=J
      II=(IND-K+1)*16
      L2=L1+II-1
      DECODE (II,10,ICLZ2(1,K))(ICHAR(L),L=L1,L2)
10    FORMAT (128A1)
      L1=L2+1
20    CONTINUE
      L=0
      DO 30 K=1,L2
      IF (ICHAR(K).EQ.1H .AND.ICHAR(K+1).EQ.1H ) GO TO 30
      L=L+1
      KHAR(L)=ICHAR(K)
30    CONTINUE
35    PRINT 40,(KHAR(K),K=1,L)
40    FORMAT (1X,130A1)
      RETURN
      END
```

```
      SUBROUTINE NEWORD (IJ,I,NPEOPLE,ICO,ITT)
C     THIS SUBROUTINE FINDS OUT IF A WORD IS A NEW WORD AND COUNTS THE
C        TIMES A WORD OCCURS
C     ITT=1 FOR MOST WORDS, ITT=2 FOR WORDS INCLUDED BUT NOT COUNTED
      DOUBLE PRECISION ICON1,ICO
      EQUIVALENCE (ICON1,ICON2)
      COMMON /C/ ICON1(4050),ICT(4050),ICON2(2,4050)
C     IIJ=STARTING POSITION IN ARRAY OF A PERSON-S WORDS
    5 IIJ=IJ*1000-999
      NN=I
      IF (NPEOPLE.EQ.1) GO TO 10
C     N=POSITION OF LAST WORD IN ARRAY FOR PERSON
      N=ICON1(IIJ+999)+IIJ-1
      IF (N.GE.1000*IJ) N=IJ*1000-2
      IF (XMODF(N,1000).EQ.0) GO TO 30
      GO TO 15
   10 N=ICON1(4000)
      IF (N.GE.4000) N=3998
      IF (N.EQ.0) GO TO 30
C     LOOP FOR BEGINNING TO END OF PERSONS WORDS
   15 DO 20 M=IIJ,N
C     IF  WORD IS ALREADY IN PERSONS WORDS, GO TO 55
      IF (ICO-ICON1(M)) 20,40,20
   20 CONTINUE
C     WHEN WORD NOT ALREADY IN PERSONS WORDS UP TOTAL COUNT OF WORDS BY
C        ONE
      M=N+1
   25 ICON1(M)=ICO
      IF (NPEOPLE.EQ.1) GO TO 35
      ICON1(IIJ+999)=ICON1(IIJ+999)+1
      IF (ITT.EQ.2) RETURN
      GO TO 40
C     FOR FIRST WORD FOR EACH PERSON, M=IIJ=STARTING POINT IN ARRAY
   30 M=IIJ
      GO TO 25
C     FOR CONCORDANCE UP TOTAL WORDS BY ONE
   35 ICON1(4000)=ICON1(4000)+1
      IF (ITT.EQ.2) RETURN
C     UP FREQ COUNTER BY ONE FOR THIS WORD
   40 ICT(M)=ICT(M)+1
      RETURN
      END
```

```
      SUBROUTINE ENDING (ICO,JJ)
      COMMON /7/ LET(16)
      DOUBLE PRECISION ICO
    5 DECODE (16,10,ICO) (LET(J),J=1,16)
   10 FORMAT (16A1)
      DO 15 J=1,16
      JJ=16-J+1
      IF (LET(JJ).NE.1H ) GO TO 20
   15 CONTINUE
   20 RETURN
      END
```

```
      SUBROUTINE PART (NB,NE,IPART)
      COMMON/7/LET(16)
      DOUBLE PRECISION IPART
      DATA (IBLNK=1H )
      NLEFT=16-(NE-NB+1)
      ENCODE (16,5,IPART) (LET(I),I=NB,NE),(IBLNK,J=1,NLEFT)
    5 FORMAT (16A1)
      RETURN
      END
```

```
      SUBROUTINE ENCODE (K,ICO,I)
C     THIS SUBROUTINE PACKS UP TO EIGHT CHARACTERS IN A WORD = USED TO
C     MAKE UP THE VARIOUS WORDS IN A CONVERSATION
      DOUBLE PRECISION ICO
      COMMON/4/IJJ(200)
      IBLNK=1H
      ICO=16H
      IF (K.LE.0) GO TO 15
C     COMPUTE BEGINNING AND ENDING POSITION ON LINE OF WORD
      LL=I+K+1
    5 IF (IJJ(LL).NE.1H ) GO TO 10
      LL=LL+1
      K=K-1
      GO TO 5
   10 IF (K.GT.16) K=16
      KK=LL+K-1
      KL=KK+1
      ENCODE (16,20,ICO) (IJJ(L),L=LL,KK),(IBLNK,L=KL,16)
   15 K=0
      RETURN
C
C
   20 FORMAT (16A1)
      END
```

```
      SUBROUTINE SENT (IJ,ICO)
C     THIS SUBROUTINE COMPUTES THE SENTENCE ANALYSIS PART OF DISCOURSE A
      COMMON /A/ ISYMBOL(30),ISELF(8),ICONJUN(11),IDO
      COMMON /C/ ICON1(4050),ICT(4050),ICON2(2,4050),ISPKW(500),IKWD(2,5
     100)
      COMMON /9/ IMARK(2),INN(2),IPON(2),ITEST1(2),ITEST2(2),ITEST3(2),I
     1TOTAL(2),ICTN(2),NSWDS(2)
      COMMON /8/ ITAPE,IREPT,IKEY,ISYMBL,IKEY2
      DOUBLE PRECISION ICON1,ISPKW,ICO
      EQUIVALENCE (ICON1,ICON2)
      EQUIVALENCE (ISPKW,IKWD)
      NSWDS(IJ)=NSWDS(IJ)+1
C     M=POSITION FOR NEW SENTENCE WORD TO BE PUT IN ARRAY
      M=INN(IJ)+IPON(IJ)*10+IMARK(IJ)
      GO TO (5,10), IJ
C     FOR PERSON NO. 1
    5 ICON2(1,1200)=M
      GO TO 15
C     FOR PERSON NO. 2
   10 ICON2(1,4050)=M
C     PUT NEW SENTENCE WORD INTO ARRAY OF SENTENCE WORDS
   15 ICON1(M)=ICO
C     SEE IF WORD IS CONJUNCTION
      DO 20 LI=1,11
      IF (ICON2(1,M).EQ.ICONJUN(LI)) GO TO 40
   20 CONTINUE
C     SEE IF WORD IS SELF REFERENCE
      DO 25 LI=1,8
      IF (ICON2(1,M).EQ.ISELF(LI)) GO TO 40
   25 CONTINUE
C     SEE IF WORD IS NEGATIVE
      DO 30 LN=1,IKEY
      IF (ICON1(M).EQ.ISPKW(LN)) GO TO 45
   30 CONTINUE
C     SEE IF WORD IS POSITIVE
      II=IKEY+1
      JJ=IKEY+IKEY2
      DO 35 LP=II,JJ
      IF (ICON1(M).EQ.ISPKW(LP)) GO TO 50
   35 CONTINUE
      ICON2(1,M)=8H
      ICON2(2,M)=8H
      ISN=ISN+1
      IF (IEND.EQ.2) GO TO 65
      GO TO 100
   40 NSELF=1
      GO TO 55
   45 NEGAT=1
      GO TO 55
   50 NPOSIT=1
C     INCREASE KEYWORDS FOUND IN A SENTENCE BY ONE
   55 IMARK(IJ)=IMARK(IJ)+1
C     INCREASE TOTAL WORDS FOUND IN A SENTENCE BY ONE
      ISN=ISN+1
      IF (IEND.EQ.2) GO TO 70
      GO TO 100
```

```
C       IF WORD IS A CONJUNCTION ELIMINATE IT AND TREAT AS END OF SENTENCE
   60   ICON2(1,M)=8H
        ICON2(2,M)=8H
C       IMARK = 1 FOR BEGINNING OF A SENTENCE. NO KEY WORDS IN IT
   65   IF (IMARK(IJ).EQ.1) GO TO 80
C       INITIALIZE FOR BEGINNING OF A SENTENCE
C       REACH HERE AFTER CONJUNCTION OR END OF A SENTENCE
C       COMPUTE STARTING POINT IN ARRAY FOR THIS SENTENCE
   70   IPP1=INN(IJ)*IPON(IJ)*10+1
        ICTN(IJ)=IPP1
        IPP2=IPP1+1
C       THE NUMBER OF THIS SENTENCE IS PUT INIO ICT PARELLEL TO 1ST WORD
C          OF SENTENCE , THE CODE INDICATING TYPE OF SENTENCE IS PUT INTO
C          ICT PARALLEL TO 2ND WORD OF SENTENCE, THE NUMBER OF WORDS IN
C          SENTENCE IS PUT INTO ICT PARALLEL TO 3RD WORD,
        ICT(IPP1)=ITOTAL(IJ)+1
        ICT(IPP1+2)=IMARK(IJ)-2
        IF (NSELF.EQ.1.AND.NPOSIT.EQ.1.AND.NEGAT.EQ.1) GO TO 95
        IF (NSELF.EQ.1.AND.NPOSIT.EQ.1) GO TO 90
        IF (NSELF.EQ.1.AND.NEGAT.EQ.1) GO TO 85
        ICT(IPP2)=4
C       INITIALIZE FOR BEGINNING OF A SENTENCE AT END OF EACH SENTENCE
C       ADD ONE TO TOTAL SENTENCES WITH KEY WORDS IN THEM
   75   IPON(IJ)=IPON(IJ)+1
        NSELF=0
        NPOSIT=0
        NEGAT=0
        IMARK(IJ)=1
C       ADD ONE TO TOTAL SENTENCES
   80   IF (ISN.NE.0) ITOTAL(IJ)=ITOTAL(IJ)+1
        IEND=1
        ISN=0
        K=0
        GO TO 100
C       SELF - NEG SENTENCE
   85   ITEST2(IJ)=ITEST2(IJ)+1
        ICT(IPP2)=2
        GO TO 75
C       SELF POS SNETENCE
   90   ITEST1(IJ)=ITEST1(IJ)+1
        ICT(IPP2)=1
        GO TO 75
C       SELF POS . NEG SENTENCE
   95   ITEST3(IJ)=ITEST3(IJ)+1
        ICT(IPP2)=3
        GO TO 75
  100   RETURN
        END
```

```
      SUBROUTINE ALF (N,M,K)
C     THIS SUBROUTINE ALPHABETIZES THE WORDS AND PRINTS THEM OUT
      COMMON /C/ ICON1(4050),ICT(4050),ICON2(2,4050)
      EQUIVALENCE (ICON1,ICON2)
      DOUBLE PRECISION ICON1
      ITG=0
      ITP=K*2-1
      JJK=0
      KA=8H
      DO 5 JK=N,M
C     IN THE UMASS CDC-3600-3800 COMPUTERS, THE CHARACTER CODES FOR
C        LETTERS J-Z RANGE BETWEEN OCTAL 41 AND OCTAL 71.  IN ALPHABETIC
C        FORM, THE LEFT MOST BIT OF WORDS BEGINNING WITH LETTERS J-Z
C        OVERFLOWS INTO THE NEGATIVE BIT OF THE WORD.  THIS LOOP SEARCHE
C        UNTIL IT HITS THE POSITIVE SECTION (A-I) OF THE PRELIMINARY
C        ALPHABETIZED LIST.
      IF (ICON1(JK).GT.0) GO TO 10
    5 CONTINUE
   10 NSTART=JK
C     PRINT WORDS OUT
   15 DO 20 JK=NSTART,M
      PRINT 35, ICON2(1,JK),ICON2(2,JK),ICT(JK)
      WRITE (ITP) ICON2(1,JK),ICON2(2,JK),ICT(JK),ITG
      WRITE (13,17)ICON2(1,JK),ICON2(2,JK),ICT(JK)
17    FORMAT (2A8,I8)
   20 CONTINUE
      IF (JJK.EQ.1) GO TO 25
C     REACH HERE AFTER HAVE PRINTED A-I OF WORDS
      MM=M
      NN=N
      JJK=1
      M=NSTART-1
      NSTART=N
      GO TO 15
C     REACH HERE AFTER FINISHED PRINTING WORDS
   25 M=MM
      N=NN
      END FILE ITP
      REWIND ITP
      REWIND 13
      RETURN
C
C
   30 FORMAT (2A8,I8)
   35 FORMAT (15X,2A8,12X,I8)
      END
```

```
      SUBROUTINE SPOTTY(IJ)
      COMMON /X/ JPR,JJPR,JTN,JJTN,JMODE,JJMODE,JVAL,JJVAL,JTP,JJTP,IX,
     1IY,JY,ITY,ISPOT(120,50),IAPH(14),NLR(4),IBW(4),IW(20)
C     ***************************************************************
      DATA(IAPH=1HA,1HB,1HC,1HD,1HE,1HF,1HG,1HH,1HI,1HJ,1HK,1HL,1HM,1HN)
C     ***************************************************************
C     IF COUNSELOR - DON-T ENTER CUMULATIVE LOOP
C     ***************************************************************
      IF(IJ.EQ.1)GO TO 30
C     NEW CLIENT RESPONSE - ADD 1 TO HORIZONTAL AXIS
C     ***************************************************************
      IX=IX+1
      IF(IX.GT.120)RETURN
      IF(JJPR.EQ.8H       )GO TO 5
      IF(JPR.NE.JJPR)GO TO 25
    5 IF(JJTN.EQ.8H       )GO TO 10
      IF(JTN.NE.JJTN)GO TO 25
   10 IF(JJMODE.EQ.8H       )GO TO 15
      IF(JMODE.NE.JJMODE)GO TO 25
   15 IF(JJVAL.EQ.8H       )GO TO 20
      IF(JVAL.NE.JJVAL)GO TO 25
   20 IF(JJTP.EQ.8H       )GO TO 22
      IF(JTP.NE.JJTP)GO TO 25
C     CRITICAL RESPONSE IDENTIFIED - ADD ONE TO VERTICAL AXIS
C     ***************************************************************
   22 IY=IY+1
      IF(IY.GT.50)RETURN
   25 IF(IY.EQ.0)RETURN
      ISPOT(IX,IY)=1H*
      JY=IY
      RETURN
C     CHECK AND RECORD TYPE OF COUNSELOR RESPONSE
C     ***************************************************************
   30 IF(IY-25)31,31,32
   31 JY=JY+1
      IF(IX.GT.0)GO TO 33
C     IF CLIENT HAS NOT RESPONDED YET RECORD PRELIMINARY COUNSELOR RESPONSE(S
C     ***************************************************************
      JX=1
      IX=JX
      JY=10
      GO TO 33
   32 JY=JY-1
   33 ISPOT(IX,JY)=IAPH(ITY)
      IF(JX.EQ.1)IX=0
      JX=0
      RETURN
      END
```

```
      SUBROUTINE MATRIX(IJ)
      COMMON /X/ JPR,JJPR,JTN,JJTN,JMODE,JJMODE,JVAL,JJVAL,JTP,JJTP,IX,
     1IY,JY,ITY,ISPOT(120,50),IAPH(14),NLR(4),IUW(4),IW(20)
      COMMON /Z/ MAT1(3,3,8),MAT2(3,3,8)
      IF(JTN.EQ.4HPAST)LI=1
      IF(JTN.EQ.7HPRESENT)LI=2
      IF(JTN.EQ.6HFUTURE)LI=3
      IF(JPR.EQ.5HFIRST)MI=1
      IF(JPR.EQ.6HSECOND)MI=2
      IF(JPR.EQ.5HTHIRD)MI=3
      IF(JMODE.EQ.6HAFFECT.AND.JVAL.EQ.8HPOSITIVE)NI=1
      IF(JMODE.EQ.6HAFFECT.AND.JVAL.EQ.5HMIXED)NI=2
      IF(JMODE.EQ.6HAFFECT.AND.JVAL.EQ.8HNEGATIVE)NI=3
      IF(JMODE.EQ.5HMIXED.AND.JVAL.EQ.8HPOSITIVE)NI=4
      IF(JMODE.EQ.5HMIXED.AND.JVAL.EQ.5HMIXED)NI=5
      IF(JMODE.EQ.5HMIXED.AND.JVAL.EQ.8HNEGATIVE)NI=6
      IF(JMODE.EQ.7HCOGNATE)NI=7
      IF(JMODE.EQ.7HNEUTRAL)NI=8
      IF(IJ.EQ.1)MAT1(LI,MI,NI)=MAT1(LI,MI,NI)+1
      IF(IJ.EQ.2)MAT2(LI,MI,NI)=MAT2(LI,MI,NI)+1
      RETURN
      END
```

```
      SUBROUTINE SUMMARY(MAT,IPER,K,IHDR,IPUN)
      DIMENSION   PMAT(3,3,8),IRSUM(8),ICSUM(3,3),ISRSUM(2),ITIM(3)
      DIMENSION PRSUM(8),PCSUM(3,3),PSRSUM(2),PTIM(3),MAT(3,3,8)
      DIMENSION IPER(4),IHDR(10)
      DO 4321 LI=1,3
      ITIM(LI)=0
      DO 4321 MI=1,3
      ICSUM(LI,MI)=0
      DO 4321 NI=1,8
      IRSUM(NI)=0
      PMAT(LI,MI,NI)=0.
 4321 CONTINUE
      DO 1300 LI=1,3
      DO 1300 MI=1,3
      DO 1300 NI=1,8
      IRSUM(NI)=IRSUM(NI)+MAT(LI,MI,NI)
      ICSUM(LI,MI)=ICSUM(LI,MI)+MAT(LI,MI,NI)
 1300 CONTINUE
      ISRSUM(1)=IRSUM(1)+IRSUM(2)+IRSUM(3)
      ISRSUM(2)=IRSUM(4)+IRSUM(5)+IRSUM(6)
      IGRSUM=ISRSUM(1)+ISRSUM(2)
      ITSUM=IRSUM(7)+IRSUM(8)+IGRSUM
      DO 1301 LI=1,3
      DO 1301 MI=1,3
      ITIM(LI)=ITIM(LI)+ICSUM(LI,MI)
 1301 CONTINUE
      DO 1302 LI=1,3
      DO 1302 MI=1,3
      DO 1302 NI=1,8
      PMAT(LI,MI,NI)=(FLOATF(MAT(LI,MI,NI))/FLOATF(ITSUM))*100.
 1302 CONTINUE
      DO 1303 NI=1,8
      PRSUM(NI)=(FLOATF(IRSUM(NI))/FLOATF(ITSUM))*100.
 1303 CONTINUE
      DO 1304 LI=1,3
      PTIM(LI)=(FLOATF(ITIM(LI))/FLOATF(ITSUM))*100.
      DO 1304 MI=1,3
      PCSUM(LI,MI)=(FLOATF(ICSUM(LI,MI))/FLOATF(ITSUM))*100.
 1304 CONTINUE
      DO 1305 I=1,2
      PSRSUM(I)=(FLOATF(ISRSUM(I))/FLOATF(ITSUM))*100.
 1305 CONTINUE
      PGRSUM=(FLOATF(IGRSUM)/FLOATF(ITSUM))*100.
      PTSUM=(FLOATF(ITSUM)/FLOATF(ITSUM))*100.
      PRINT 3000,IPER(K)
      PRINT 270,IHDR
  270 FORMAT(1X,9A8,A7)
      PRINT 3001
      PRINT 3018
      PRINT 3002
      PRINT 3003
      PRINT 3004
      PRINT 3005,  ((PMAT(LI,MI,1),MI=1,3),LI=1,3),PRSUM(1)
      PRINT 3004
      PRINT 3006
      PRINT 3004
```

```
      PRINT 3007,  ((PMAT(LI,MI,2),MI=1,3),LI=1,3),PRSUM(2),PSRSUM(1)
      PRINT 3004
      PRINT 3006
      PRINT 3004
      PRINT 3008,  ((PMAT(LI,MI,3),MI=1,3),LI=1,3),PRSUM(3)
      PRINT 3004
      PRINT 3009,PGRSUM
      PRINT 3004
      PRINT 3005,  ((PMAT(LI,MI,4),MI=1,3),LI=1,3),PRSUM(4)
      PRINT 3004
      PRINT 3006
      PRINT 3004
      PRINT 3010,  ((PMAT(LI,MI,5),MI=1,3),LI=1,3),PRSUM(5),PSRSUM(2)
      PRINT 3004
      PRINT 3006
      PRINT 3004
      PRINT 3008,  ((PMAT(LI,MI,6),MI=1,3),LI=1,3),PRSUM(6)
      PRINT 3004
      PRINT 3003
      PRINT 3011
      PRINT 3012,  ((PMAT(LI,MI,7),MI=1,3),LI=1,3),PRSUM(7)
      PRINT 3011
      PRINT 3013
      PRINT 3011
      PRINT 3014,  ((PMAT(LI,MI,8),MI=1,3),LI=1,3),PRSUM(8)
      PRINT 3011
      PRINT 3003
      PRINT 3015,((PCSUM(LI,MI),MI=1,3),LI=1,3)
      PRINT 3016,(PTIM(LI),LI=1,3),PTSUM
      PRINT 3017,IPER(K)
      IF(IPUN.NE.1)GO TO 1986
      PUNCH 1973,    IPER(K),(((PMAT(I,J,L),J=1,3),I=1,3),L=1,8)
1973  FORMAT(1H2,A8,35F2.0/1H3,37F2.0)
      PUNCH 1974,    IPER(K),((PCSUM(I,J),J=1,3),I=1,3),(PRSUM(I),I=1,8)
     1,(PSRSUM(I),I=1,2),PGRSUM
1974  FORMAT(1H4,A8,20F2.0)
3000  FORMAT(1H1//,45X,*CLAUSE ANALYSIS MATRIX FOR *,A8/)
3001  FORMAT(/31X,*PAST*,23X,*PRESENT*,23X,*FUTURE*,18X,*SUMMARY*)
3018  FORMAT(112X,*TOTALS*/)
3002  FORMAT(4X,*MODE*,8X,*VALENCE*,3X,*1ST  2ND  3RD*,2(16X,*1ST  2ND
     13RD*))
3003  FORMAT(1X,40(1H*),2(13X,16(1H*)),6X,2(1H*))
3004  FORMAT(12X,3(13X,1H*,4X,1H*,4X,1H*,4X,1H*),6X,1H*,3(6X,1H*))
3005  FORMAT(16X,*POSITIVE *,1H*,3(1X,F2.0,1X,1H*),2(13X,1H*,3(1X,F2.0,1
     11X,1H*)),6X,1H*,2X,F2.0,2X,1H*,2(6X,1H*))
3006  FORMAT(12X,3(13X,16(1H*)),4(6X,1H*))
3007  FORMAT(4X,*AFFECTIVE*,6X,*MIXED *,1H*,3(1X,F2.0,1X,1H*),2(13X,1H*,
     13(1X,F2.0,1X,1H*)),6X,1H*,2(2X,F2.0,2X,1H*),6X,1H*)
3008  FORMAT(16X,*NEGATIVE *,1H*,3(1X,F2.0,1X,1H*),2(13X,1H*,3(1X,F2.0,1
     11X,1H*)),6X,1H*,2X,F2.0,2X,1H*,2(6X,1H*))
3009  FORMAT(1X,40(1H*),2(13X,16(1H*)),6X,1?(1H*),2X,F2.0,2X,1H*)
3010  FORMAT(4X,*MIXED*,10X,*MIXED *,   1H*,3(1X,F2.0,1X,1H*),2(13X,1H*,
     13(1X,F2.0,1X,1H*)),6X,1H*,2(2X,F2.0,2X,1H*),6X,1H*)
3011  FORMAT(12X,3(13X,1H*,4X,1H*,4X,1H*,4X,1H*),6X,1H*,20X,1H*)
3012  FORMAT(4X,*COGNITIVE*,12X,1H*,3(1X,F2.0,1X,1H*),2(13X,1H*,3(1X,F2.
     10,1X,1H*)),6X,1H*,16X,F2.0,2X,1H*)
```

```
3013 FORMAT(1X,40(1H*),2(13X,16(1H*)),6X,1H*,20X,1H*)
3014 FORMAT(4X,*NEUTRAL  *,12X,1H*,3(1X,F2,0,1X,1H*),2(13X,1H*,3(1X,F2,
    10,1X,1H*)),6X,1H*,16X,F2,0,2X,1H*)
3015 FORMAT(4X,*SUMMARY TOTALS*,6X,3(3X,F2,0),2(14X,3(3X,F2,0))/)
3016 FORMAT(5X,3(27X,F2,0),29X,F3,0/)
3017 FORMAT(/* ALL ENTRIES EXPRESSED AS PERCENTS OF TOTAL RESPONSES BY
    1*,A8)
1986 RETURN
     END
```

```
      PROGRAM CHANGE
      DIMENSION V(2,150,5),DIF(2,150,5),VMIN(2,150),VMAX(2,150),XBAR(2,1
     150),IPER(2),LABEL(2,150),SUM(2,150),RANGE(2,150)
      READ 100,((LABEL(I,J),I=1,2),J=1,142)
  100 FORMAT(10A8)
    5 DO 20 N=1,5
      DO 20 M=1,2
      READ 100,IHDR
   10 READ 1970,IPER(M),(V(M,I,N),I=1,22)
 1970 FORMAT(1X,A8,F5.2,F2.0,F4.2,F5.2,18F2.0)
      IF(M.EQ.2)GO TO 15
      READ 1973,(V(M,I,N),I=115,128)
 1973 FORMAT(9X,14F2.0)
      READ 1974,(V(M,I,N),I=129,142)
 1974 FORMAT(9X,14F5.2)
   15 READ 1971,(V(M,I,N),I=23,94)
 1971 FORMAT(9X,35F2.0/37F2.0)
      READ 1972,(V(M,I,N),I=95,114)
 1972 FORMAT(9X,20F2.0)
   20 CONTINUE
      DO 22 I=1,142
      DO 22 M=1,2
      SUM(M,I)=0.0
      VMAX(M,I)=0.0
      VMIN(M,I)=1000.
      XBAR(M,I)=0.0
   22 CONTINUE
   25 DO 30 I=1,142
      DO 30 M=1,2
      IF(M.EQ.2.AND.I.GT.114)GO TO 30
      DO 28 N=1,5
      SUM(M,I)=SUM(M,I)+V(M,I,N)
      IF(VMAX(M,I).LT.V(M,I,N))VMAX(M,I)=V(M,I,N)
      IF(VMIN(M,I).GT.V(M,I,N))VMIN(M,I)=V(M,I,N)
      DIF(M,I,N)=V(M,I,N)-V(M,I,1)
   28 CONTINUE
   30 CONTINUE
      DO 35 I=1,142
      DO 35 M=1,2
      IF(M.EQ.2.AND.I.GT.114)GO TO 35
      RANGE(M,I)=VMAX(M,I)-VMIN(M,I)
      IF(SUM(M,I).EQ.0.0)GO TO 35
      XBAR(M,I)=SUM(M,I)/5.
   35 CONTINUE
      DO 40 M=1,2
      PRINT 200
      PRINT 201,IPER(M)
      PRINT 100,IHDR
      PRINT 202
      DO 40 I=1,142
      IF(M.EQ.2.AND.I.GT.114)GO TO 40
      PRINT 203,I,(LABEL(J,I),J=1,2),V(M,I,1),(DIF(M,I,N),N=2,5),XBAR(M,
     1I),VMAX(M,I),VMIN(M,I),RANGE(M,I)
   40 CONTINUE
  200 FORMAT(1H1,24X,*SUMMARY OF VARIABLE STATISTICS*)
  201 FORMAT(34X,*FOR*,A8/)
```

```
202 FORMAT(1X,*VARIABLE*,14X,*PER 1 PER 2 PER 3 PER 4 PER 5    MEAN
   1MAX    MIN    RANGE*/)
203 FORMAT(1X,I3,1X,2A8,5(1X,F5.1),3X,3(1X,F5.2),2X,F5.2)
    DO 60 M=1,2
    PRINT 300
300 FORMAT(1H1)
    DO 60 I=1,142
    IF(M.EQ.2.AND.I.GT.114)GO TO 60
    PRINT 250,I,VMAX(M,I),I,VMIN(M,I)
    PUNCH 250,I,VMAX(M,I),I,VMIN(M,I)
250 FORMAT(6X,*IF(V(*,I3,*),LE.*,F6.2,*,AND,V(*,I3,*),GE,*,F6.2,*)ICT(
   1K)=ICT(K)+1*)
 60 CONTINUE
    STOP
    END
```

```
      IF(V( 90).LE. 81.00.AND.V( 90).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 91).LE. 81.00.AND.V( 91).GE.  3.00)ICT(K)=ICT(K)+1
      IF(V( 92).LE. 90.00.AND.V( 92).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 93).LE.  0.00.AND.V( 93).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 94).LE. 30.00.AND.V( 94).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 95).LE.  5.00.AND.V( 95).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 96).LE.  5.00.AND.V( 96).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 97).LE.  4.00.AND.V( 97).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 98).LE. 42.00.AND.V( 98).GE. 26.00)ICT(K)=ICT(K)+1
      IF(V( 99).LE. 41.00.AND.V( 99).GE. 27.00)ICT(K)=ICT(K)+1
      IF(V(100).LE. 40.00.AND.V(100).GE. 24.00)ICT(K)=ICT(K)+1
      IF(V(101).LE.  0.00.AND.V(101).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(102).LE.  3.00.AND.V(102).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(103).LE.  4.00.AND.V(103).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(115).LE.  0.00.AND.V(115).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(116).LE.  5.00.AND.V(116).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(117).LE.  5.00.AND.V(117).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(118).LE. 32.00.AND.V(118).GE. 24.00)ICT(K)=ICT(K)+1
      IF(V(119).LE. 14.00.AND.V(119).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(120).LE.  5.00.AND.V(120).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(121).LE. 26.00.AND.V(121).GE. 15.00)ICT(K)=ICT(K)+1
      IF(V(122).LE.  0.00.AND.V(122).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(123).LE. 15.00.AND.V(123).GE.  9.00)ICT(K)=ICT(K)+1
      IF(V(125).LE.  4.00.AND.V(125).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(126).LE. 33.00.AND.V(126).GE. 18.00)ICT(K)=ICT(K)+1
      IF(V(127).LE.  0.00.AND.V(127).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(128).LE.  9.00.AND.V(128).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(130).LE.  0.00.AND.V(130).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(131).LE.  8.00.AND.V(131).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(132).LE. 26.00.AND.V(132).GE. 11.00)ICT(K)=ICT(K)+1
      IF(V(133).LE. 16.33.AND.V(133).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(134).LE.  8.00.AND.V(134).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(135).LE. 16.00.AND.V(135).GE.  8.86)ICT(K)=ICT(K)+1
      IF(V(136).LE.  0.00.AND.V(136).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(137).LE. 17.00.AND.V(137).GE.  5.00)ICT(K)=ICT(K)+1
      IF(V(139).LE.  6.00.AND.V(139).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(140).LE. 25.25.AND.V(140).GE. 11.64)ICT(K)=ICT(K)+1
      IF(V(141).LE.  0.00.AND.V(141).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(142).LE.  9.67.AND.V(142).GE.  0.00)ICT(K)=ICT(K)+1
      PCT1(K)=(FLOATF(ICT(K))/71.)*100.
C  CHECK FOR GESTALT RESPONSE CHARACTERISTICS
      K=2
      ICT(K)=0
      IF(V(  1).LE.  6.85.AND.V(  1).GE.  5.86)ICT(K)=ICT(K)+1
      IF(V(  2).LE. 50.00.AND.V(  2).GE. 41.00)ICT(K)=ICT(K)+1
      IF(V(  3).LE.  0.44.AND.V(  3).GE.  0.37)ICT(K)=ICT(K)+1
      IF(V(  4).LE.  3.87.AND.V(  4).GE.  3.63)ICT(K)=ICT(K)+1
      IF(V(  5).LE. 44.00.AND.V(  5).GE. 35.00)ICT(K)=ICT(K)+1
      IF(V(  6).LE. 19.00.AND.V(  6).GE. 14.00)ICT(K)=ICT(K)+1
      IF(V(  7).LE. 28.00.AND.V(  7).GE. 10.00)ICT(K)=ICT(K)+1
      IF(V(  8).LE. 67.00.AND.V(  8).GE. 37.00)ICT(K)=ICT(K)+1
      IF(V(  9).LE. 43.00.AND.V(  9).GE. 18.00)ICT(K)=ICT(K)+1
      IF(V( 10).LE. 13.00.AND.V( 10).GE.  3.00)ICT(K)=ICT(K)+1
      IF(V( 11).LE. 98.00.AND.V( 11).GE. 87.00)ICT(K)=ICT(K)+1
      IF(V( 12).LE.  2.00.AND.V( 12).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 13).LE. 71.00.AND.V( 13).GE. 55.00)ICT(K)=ICT(K)+1
```

```
      PROGRAM STYLE
      DIMENSION V(150),IPER(2),ICT(3),PCT1(3),PCT2(3)
      READ 101, JOBS
  101 FORMAT(I2)
      DO 99 IJ=1,JOBS
      M=0
    5 M=M+1
  100 FORMAT(10A8)
      READ 100,IHDR
      READ 1970,IPER(M),(V(I),I=1,22)
 1970 FORMAT(1X,A8,F5.2,F2.0,F4.2,F5.2,18F2.0)
      IF(M.EQ.2)GO TO 15
      READ 1973,(V(I),I=115,128)
 1973 FORMAT(9X,14F2.0)
      READ 1974,(V(I),I=129,142)
 1974 FORMAT(9X,14F5.2)
   15 READ 1971,(V(  I  ),I=23,94)
 1971 FORMAT(9X,35F2.0/37F2.0)
      READ 1972,(V(  I  ),I=95,114)
 1972 FORMAT(9X,20F2.0)
      IF(M.EQ.2)GO TO 50
C  CHECK FOR CLIENT CENTERED RESPONSE CHARACTERISTICS
      K=1
      ICT(K)=0
      IF(V(  1).LE. 17.00.AND.V(  1).GE. 10.58)ICT(K)=ICT(K)+1
      IF(V(  2).LE. 34.00.AND.V(  2).GE. 19.00)ICT(K)=ICT(K)+1
      IF(V(  3).LE.  0.47.AND.V(  3).GE.  0.39)ICT(K)=ICT(K)+1
      IF(V(  4).LE.  3.95.AND.V(  4).GE.  3.83)ICT(K)=ICT(K)+1
      IF(V(  5).LE. 32.00.AND.V(  5).GE. 28.00)ICT(K)=ICT(K)+1
      IF(V(  6).LE. 20.00.AND.V(  6).GE. 16.00)ICT(K)=ICT(K)+1
      IF(V(  7).LE. 42.00.AND.V(  7).GE. 26.00)ICT(K)=ICT(K)+1
      IF(V(  8).LE. 41.00.AND.V(  8).GE. 30.00)ICT(K)=ICT(K)+1
      IF(V(  9).LE. 40.00.AND.V(  9).GE. 27.00)ICT(K)=ICT(K)+1
      IF(V( 10).LE.  9.00.AND.V( 10).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 11).LE. 99.00.AND.V( 11).GE. 91.00)ICT(K)=ICT(K)+1
      IF(V( 12).LE.  6.00.AND.V( 12).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 13).LE. 48.00.AND.V( 13).GE. 35.00)ICT(K)=ICT(K)+1
      IF(V( 14).LE. 10.00.AND.V( 14).GE.  3.00)ICT(K)=ICT(K)+1
      IF(V( 15).LE. 48.00.AND.V( 15).GE. 27.00)ICT(K)=ICT(K)+1
      IF(V( 16).LE. 23.00.AND.V( 16).GE.  7.00)ICT(K)=ICT(K)+1
      IF(V( 17).LE. 25.00.AND.V( 17).GE.  7.00)ICT(K)=ICT(K)+1
      IF(V( 18).LE. 21.00.AND.V( 18).GE.  5.00)ICT(K)=ICT(K)+1
      IF(V( 19).LE. 20.00.AND.V( 19).GE. 12.00)ICT(K)=ICT(K)+1
      IF(V( 77).LE.  0.00.AND.V( 77).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 78).LE.  0.00.AND.V( 78).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 79).LE.  0.00.AND.V( 79).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 80).LE.  1.00.AND.V( 80).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 81).LE. 70.00.AND.V( 81).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 82).LE. 30.00.AND.V( 82).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 83).LE. 50.00.AND.V( 83).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 84).LE.  0.00.AND.V( 84).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 85).LE.  0.00.AND.V( 85).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 86).LE.  0.00.AND.V( 86).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 87).LE.  0.00.AND.V( 87).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 88).LE. 50.00.AND.V( 88).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 89).LE.  1.00.AND.V( 89).GE.  1.00)ICT(K)=ICT(K)+1
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      IF(V( 14).LE. 10.00.AND.V( 14).GE.  3.00)ICT(K)=ICT(K)+1
      IF(V( 15).LE. 33.00.AND.V( 15).GE. 20.00)ICT(K)=ICT(K)+1
      IF(V( 16).LE.  8.00.AND.V( 16).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 17).LE. 13.00.AND.V( 17).GE.  2.00)ICT(K)=ICT(K)+1
      IF(V( 18).LE. 23.00.AND.V( 18).GE. 10.00)ICT(K)=ICT(K)+1
      IF(V( 19).LE. 10.00.AND.V( 19).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 77).LE.  0.00.AND.V( 77).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 78).LE. 40.00.AND.V( 78).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 79).LE.  0.00.AND.V( 79).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 80).LE.  0.00.AND.V( 80).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 81).LE. 50.00.AND.V( 81).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 82).LE. 30.00.AND.V( 82).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 83).LE. 50.00.AND.V( 83).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 84).LE.  0.00.AND.V( 84).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 85).LE.  0.00.AND.V( 85).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 86).LE.  0.00.AND.V( 86).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 87).LE.  0.00.AND.V( 87).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 88).LE. 80.00.AND.V( 88).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 89).LE.  1.00.AND.V( 89).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 90).LE. 64.00.AND.V( 90).GE.  2.00)ICT(K)=ICT(K)+1
      IF(V( 91).LE. 81.00.AND.V( 91).GE. 11.00)ICT(K)=ICT(K)+1
      IF(V( 92).LE. 90.00.AND.V( 92).GE. 30.00)ICT(K)=ICT(K)+1
      IF(V( 93).LE. 20.00.AND.V( 93).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 94).LE.  0.00.AND.V( 94).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 95).LE.  4.00.AND.V( 95).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 96).LE. 10.00.AND.V( 96).GE.  3.00)ICT(K)=ICT(K)+1
      IF(V( 97).LE.  0.00.AND.V( 97).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 98).LE. 26.00.AND.V( 98).GE.  8.00)ICT(K)=ICT(K)+1
      IF(V( 99).LE. 63.00.AND.V( 99).GE. 31.00)ICT(K)=ICT(K)+1
      IF(V(100).LE. 43.00.AND.V(100).GE. 18.00)ICT(K)=ICT(K)+1
      IF(V(101).LE.  2.00.AND.V(101).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(102).LE.  0.00.AND.V(102).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(103).LE.  0.00.AND.V(103).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(115).LE. 13.00.AND.V(115).GE.  3.00)ICT(K)=ICT(K)+1
      IF(V(116).LE.  2.00.AND.V(116).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(117).LE.  8.00.AND.V(117).GE.  2.00)ICT(K)=ICT(K)+1
      IF(V(118).LE. 31.00.AND.V(118).GE. 13.00)ICT(K)=ICT(K)+1
      IF(V(119).LE.  4.00.AND.V(119).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(120).LE.  3.00.AND.V(120).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(121).LE. 29.00.AND.V(121).GE.  4.00)ICT(K)=ICT(K)+1
      IF(V(122).LE. 13.00.AND.V(122).GE.  4.00)ICT(K)=ICT(K)+1
      IF(V(123).LE. 31.00.AND.V(123).GE. 15.00)ICT(K)=ICT(K)+1
      IF(V(125).LE.  2.00.AND.V(125).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(126).LE. 21.00.AND.V(126).GE.  6.00)ICT(K)=ICT(K)+1
      IF(V(127).LE.  2.00.AND.V(127).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(128).LE.  0.00.AND.V(128).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(130).LE.  2.00.AND.V(130).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(131).LE.  5.00.AND.V(131).GE.  2.50)ICT(K)=ICT(K)+1
      IF(V(132).LE. 11.60.AND.V(132).GE.  5.88)ICT(K)=ICT(K)+1
      IF(V(133).LE. 16.00.AND.V(133).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(134).LE. 21.00.AND.V(134).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(135).LE.  7.00.AND.V(135).GE.  5.36)ICT(K)=ICT(K)+1
      IF(V(136).LE.  5.00.AND.V(136).GE.  2.67)ICT(K)=ICT(K)+1
      IF(V(137).LE.  7.13.AND.V(137).GE.  6.14)ICT(K)=ICT(K)+1
      IF(V(139).LE.  9.00.AND.V(139).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(140).LE. 10.13.AND.V(140).GE.  7.33)ICT(K)=ICT(K)+1
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      IF(V(141).LE.  6.00.AND.V(141).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(142).LE.  0.00.AND.V(142).GE.  0.00)ICT(K)=ICT(K)+1
      PCT1(K)=(FLOATF(ICT(K))/71.)*100.
C  CHECK FOR RATIONAL EMOTIVE RESPONSE CHARACTERISTICS
      K=3
      ICT(K)=0
      IF(V(  1).LE. 20.13.AND.V(  1).GE. 12.48)ICT(K)=ICT(K)+1
      IF(V(  2).LE. 82.00.AND.V(  2).GE. 38.00)ICT(K)=ICT(K)+1
      IF(V(  3).LE.  0.49.AND.V(  3).GE.  0.39)ICT(K)=ICT(K)+1
      IF(V(  4).LE.  4.36.AND.V(  4).GE.  3.52)ICT(K)=ICT(K)+1
      IF(V(  5).LE. 96.00.AND.V(  5).GE. 38.00)ICT(K)=ICT(K)+1
      IF(V(  6).LE. 26.00.AND.V(  6).GE. 17.00)ICT(K)=ICT(K)+1
      IF(V(  7).LE. 22.00.AND.V(  7).GE.  9.00)ICT(K)=ICT(K)+1
      IF(V(  8).LE. 78.00.AND.V(  8).GE. 34.00)ICT(K)=ICT(K)+1
      IF(V(  9).LE. 50.00.AND.V(  9).GE. 13.00)ICT(K)=ICT(K)+1
      IF(V( 10).LE.  9.00.AND.V( 10).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 11).LE. 97.00.AND.V( 11).GE. 89.00)ICT(K)=ICT(K)+1
      IF(V( 12).LE.  6.00.AND.V( 12).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 13).LE. 63.00.AND.V( 13).GE. 39.00)ICT(K)=ICT(K)+1
      IF(V( 14).LE. 13.00.AND.V( 14).GE.  3.00)ICT(K)=ICT(K)+1
      IF(V( 15).LE. 31.00.AND.V( 15).GE. 13.00)ICT(K)=ICT(K)+1
      IF(V( 16).LE. 22.00.AND.V( 16).GE. 13.00)ICT(K)=ICT(K)+1
      IF(V( 17).LE. 13.00.AND.V( 17).GE.  4.00)ICT(K)=ICT(K)+1
      IF(V( 18).LE. 35.00.AND.V( 18).GE. 16.00)ICT(K)=ICT(K)+1
      IF(V( 19).LE. 13.00.AND.V( 19).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 77).LE.  0.00.AND.V( 77).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 78).LE.  0.00.AND.V( 78).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 79).LE.  0.00.AND.V( 79).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 80).LE.  0.00.AND.V( 80).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 81).LE. 40.00.AND.V( 81).GE. 30.00)ICT(K)=ICT(K)+1
      IF(V( 82).LE. 90.00.AND.V( 82).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 83).LE.  0.00.AND.V( 83).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 84).LE.  0.00.AND.V( 84).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 85).LE.  0.00.AND.V( 85).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 86).LE. 30.00.AND.V( 86).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 87).LE. 30.00.AND.V( 87).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 88).LE. 30.00.AND.V( 88).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 89).LE. 30.00.AND.V( 89).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 90).LE. 92.00.AND.V( 90).GE. 31.00)ICT(K)=ICT(K)+1
      IF(V( 91).LE. 93.00.AND.V( 91).GE. 32.00)ICT(K)=ICT(K)+1
      IF(V( 92).LE. 90.00.AND.V( 92).GE. 10.00)ICT(K)=ICT(K)+1
      IF(V( 93).LE. 30.00.AND.V( 93).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 94).LE. 40.00.AND.V( 94).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 95).LE.  3.00.AND.V( 95).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 96).LE.  6.00.AND.V( 96).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 97).LE.  3.00.AND.V( 97).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 98).LE. 16.00.AND.V( 98).GE.  9.00)ICT(K)=ICT(K)+1
      IF(V( 99).LE. 70.00.AND.V( 99).GE. 34.00)ICT(K)=ICT(K)+1
      IF(V(100).LE. 47.00.AND.V(100).GE. 13.00)ICT(K)=ICT(K)+1
      IF(V(101).LE.  6.00.AND.V(101).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(102).LE.  4.00.AND.V(102).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(103).LE.  3.00.AND.V(103).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(115).LE.  4.00.AND.V(115).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(116).LE.  0.00.AND.V(116).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(117).LE.  6.00.AND.V(117).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(118).LE. 31.00.AND.V(118).GE.  3.00)ICT(K)=ICT(K)+1
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      IF(V(119).LE.  6.00.AND.V(119).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(120).LE.  9.00.AND.V(120).GE.  3.00)ICT(K)=ICT(K)+1
      IF(V(121).LE. 38.00.AND.V(121).GE. 13.00)ICT(K)=ICT(K)+1
      IF(V(122).LE.  3.00.AND.V(122).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(123).LE. 22.00.AND.V(123).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(125).LE.  9.00.AND.V(125).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(126).LE. 19.00.AND.V(126).GE.  9.00)ICT(K)=ICT(K)+1
      IF(V(127).LE. 22.00.AND.V(127).GE.  6.00)ICT(K)=ICT(K)+1
      IF(V(128).LE.  3.00.AND.V(128).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(130).LE.  0.00.AND.V(130).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(131).LE.  4.00.AND.V(131).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(132).LE. 14.60.AND.V(132).GE. 11.17)ICT(K)=ICT(K)+1
      IF(V(133).LE. 14.00.AND.V(133).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(134).LE. 37.00.AND.V(134).GE. 22.00)ICT(K)=ICT(K)+1
      IF(V(135).LE. 17.67.AND.V(135).GE.  6.71)ICT(K)=ICT(K)+1
      IF(V(136).LE. 14.00.AND.V(136).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(137).LE. 15.00.AND.V(137).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(139).LE. 52.33.AND.V(139).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(140).LE. 19.60.AND.V(140).GE.  6.00)ICT(K)=ICT(K)+1
      IF(V(141).LE. 34.00.AND.V(141).GE. 10.80)ICT(K)=ICT(K)+1
      IF(V(142).LE.  8.00.AND.V(142).GE.  0.00)ICT(K)=ICT(K)+1
      PCT1(K)=(FLOAT(ICT(K))/71.)*100.
      IF(M.EQ.1)GO TO 5
C     CHECK FOR CLIENT CENTERED EFFECTS
   50 K=1
      ICT(K)=0
      IF(V(  1).LE. 13.17.AND.V(  1).GE.  9.95)ICT(K)=ICT(K)+1
      IF(V(  2).LE. 81.00.AND.V(  2).GE. 66.00)ICT(K)=ICT(K)+1
      IF(V(  3).LE.  0.32.AND.V(  3).GE.  0.30)ICT(K)=ICT(K)+1
      IF(V(  4).LE.  3.80.AND.V(  4).GE.  3.60)ICT(K)=ICT(K)+1
      IF(V(  5).LE. 72.00.AND.V(  5).GE. 68.00)ICT(K)=ICT(K)+1
      IF(V(  6).LE. 18.00.AND.V(  6).GE. 12.00)ICT(K)=ICT(K)+1
      IF(V(  7).LE. 78.00.AND.V(  7).GE. 62.00)ICT(K)=ICT(K)+1
      IF(V(  8).LE.  7.00.AND.V(  8).GE.  3.00)ICT(K)=ICT(K)+1
      IF(V(  9).LE. 34.00.AND.V(  9).GE. 19.00)ICT(K)=ICT(K)+1
      IF(V( 10).LE. 16.00.AND.V( 10).GE.  3.00)ICT(K)=ICT(K)+1
      IF(V( 11).LE. 93.00.AND.V( 11).GE. 84.00)ICT(K)=ICT(K)+1
      IF(V( 12).LE.  6.00.AND.V( 12).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 13).LE. 56.00.AND.V( 13).GE. 30.00)ICT(K)=ICT(K)+1
      IF(V( 14).LE.  3.00.AND.V( 14).GE.  3.00)ICT(K)=ICT(K)+1
      IF(V( 15).LE. 48.00.AND.V( 15).GE. 31.00)ICT(K)=ICT(K)+1
      IF(V( 16).LE. 19.00.AND.V( 16).GE.  7.00)ICT(K)=ICT(K)+1
      IF(V( 17).LE. 18.00.AND.V( 17).GE. 10.00)ICT(K)=ICT(K)+1
      IF(V( 18).LE. 34.00.AND.V( 18).GE. 15.00)ICT(K)=ICT(K)+1
      IF(V( 19).LE. 19.00.AND.V( 19).GE.  3.00)ICT(K)=ICT(K)+1
      IF(V( 77).LE.  0.00.AND.V( 77).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 78).LE. 20.00.AND.V( 78).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 79).LE.  0.00.AND.V( 79).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 80).LE.  0.00.AND.V( 80).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 81).LE. 50.00.AND.V( 81).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 82).LE.  0.00.AND.V( 82).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 83).LE. 20.00.AND.V( 83).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 84).LE.  0.00.AND.V( 84).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 85).LE.  0.00.AND.V( 85).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 86).LE.  0.00.AND.V( 86).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 87).LE. 50.00.AND.V( 87).GE.  0.00)ICT(K)=ICT(K)+1
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      IF(V( 86).LE.  0.00.AND.V( 86).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 87).LE. 31.00.AND.V( 87).GE.  3.00)ICT(K)=ICT(K)+1
      IF(V( 90).LE. 90.00.AND.V( 90).GE. 10.00)ICT(K)=ICT(K)+1
      IF(V( 91).LE. 61.00.AND.V( 91).GE.  2.00)ICT(K)=ICT(K)+1
      IF(V( 92).LE. 80.00.AND.V( 92).GE. 10.00)ICT(K)=ICT(K)+1
      IF(V( 93).LE. 40.00.AND.V( 93).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 94).LE.  0.00.AND.V( 94).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 95).LE. 11.00.AND.V( 95).GE.  1.00)ICT(K)=ICT(K)+1
      IF(V( 96).LE.  0.00.AND.V( 96).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 97).LE.  5.00.AND.V( 97).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 98).LE. 67.00.AND.V( 98).GE. 54.00)ICT(K)=ICT(K)+1
      IF(V( 99).LE.  7.00.AND.V( 99).GE.  3.00)ICT(K)=ICT(K)+1
      IF(V(100).LE. 31.00.AND.V(100).GE. 14.00)ICT(K)=ICT(K)+1
      IF(V(101).LE.  4.00.AND.V(101).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(102).LE.  0.00.AND.V(102).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(103).LE.  3.00.AND.V(103).GE.  0.00)ICT(K)=ICT(K)+1
      PCT2(K)=(FLOATF(ICT(K))/46.)*100.
C  CHECK FOR GESTALT EFFECTS
      K=2
      ICT(K)=0
      IF(V(  1).LE. 10.40.AND.V(  1).GE.  7.12)ICT(K)=ICT(K)+1
      IF(V(  2).LE. 59.00.AND.V(  2).GE. 50.00)ICT(K)=ICT(K)+1
      IF(V(  3).LE.  0.36.AND.V(  3).GE.  0.33)ICT(K)=ICT(K)+1
      IF(V(  4).LE.  3.79.AND.V(  4).GE.  3.53)ICT(K)=ICT(K)+1
      IF(V(  5).LE. 65.00.AND.V(  5).GE. 56.00)ICT(K)=ICT(K)+1
      IF(V(  6).LE. 18.00.AND.V(  6).GE. 12.00)ICT(K)=ICT(K)+1
      IF(V(  7).LE. 59.00.AND.V(  7).GE. 53.00)ICT(K)=ICT(K)+1
      IF(V(  8).LE. 21.00.AND.V(  8).GE.  9.00)ICT(K)=ICT(K)+1
      IF(V(  9).LE. 38.00.AND.V(  9).GE. 26.00)ICT(K)=ICT(K)+1
      IF(V( 10).LE.  8.00.AND.V( 10).GE.  2.00)ICT(K)=ICT(K)+1
      IF(V( 11).LE. 97.00.AND.V( 11).GE. 92.00)ICT(K)=ICT(K)+1
      IF(V( 12).LE.  2.00.AND.V( 12).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 13).LE. 59.00.AND.V( 13).GE. 33.00)ICT(K)=ICT(K)+1
      IF(V( 14).LE.  6.00.AND.V( 14).GE.  2.00)ICT(K)=ICT(K)+1
      IF(V( 15).LE. 56.00.AND.V( 15).GE. 29.00)ICT(K)=ICT(K)+1
      IF(V( 16).LE. 10.00.AND.V( 16).GE.  5.00)ICT(K)=ICT(K)+1
      IF(V( 17).LE.  9.00.AND.V( 17).GE.  4.00)ICT(K)=ICT(K)+1
      IF(V( 18).LE. 23.00.AND.V( 18).GE. 16.00)ICT(K)=ICT(K)+1
      IF(V( 19).LE. 13.00.AND.V( 19).GE.  3.00)ICT(K)=ICT(K)+1
      IF(V( 77).LE.  0.00.AND.V( 77).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 78).LE.  0.00.AND.V( 78).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 79).LE.  0.00.AND.V( 79).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 80).LE.  0.00.AND.V( 80).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 81).LE. 60.00.AND.V( 81).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 82).LE. 20.00.AND.V( 82).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 83).LE. 40.00.AND.V( 83).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 84).LE.  0.00.AND.V( 84).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 85).LE.  0.00.AND.V( 85).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 86).LE.  0.00.AND.V( 86).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 87).LE.  0.00.AND.V( 87).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 88).LE. 20.00.AND.V( 88).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 89).LE. 22.00.AND.V( 89).GE.  2.00)ICT(K)=ICT(K)+1
      IF(V( 90).LE. 50.00.AND.V( 90).GE. 10.00)ICT(K)=ICT(K)+1
      IF(V( 91).LE. 91.00.AND.V( 91).GE. 42.00)ICT(K)=ICT(K)+1
      IF(V( 92).LE. 90.00.AND.V( 92).GE. 10.00)ICT(K)=ICT(K)+1
      IF(V( 93).LE. 20.00.AND.V( 93).GE.  0.00)ICT(K)=ICT(K)+1
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      IF(V( 94).LE. 22.00.AND.V( 94).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 95).LE.  4.00.AND.V( 95).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 96).LE.  2.00.AND.V( 96).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 97).LE.  2.00.AND.V( 97).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 98).LE. 56.00.AND.V( 98).GE. 50.00)ICT(K)=ICT(K)+1
      IF(V( 99).LE. 17.00.AND.V( 99).GE.  9.00)ICT(K)=ICT(K)+1
      IF(V(100).LE. 36.00.AND.V(100).GE. 24.00)ICT(K)=ICT(K)+1
      IF(V(101).LE.  2.00.AND.V(101).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(102).LE.  2.00.AND.V(102).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(103).LE.  0.00.AND.V(103).GE.  0.00)ICT(K)=ICT(K)+1
      PCT2(K)=(FLOATF(ICT(K))/46.)*100.
C  CHECK FOR RATIONAL EMOTIVE EFFECTS
      K=3
      ICT(K)=0
      IF(V(  1).LE. 12.21.AND.V(  1).GE.  4.00)ICT(K)=ICT(K)+1
      IF(V(  2).LE. 62.00.AND.V(  2).GE. 18.00)ICT(K)=ICT(K)+1
      IF(V(  3).LE.  0.57.AND.V(  3).GE.  0.37)ICT(K)=ICT(K)+1
      IF(V(  4).LE.  4.18.AND.V(  4).GE.  3.51)ICT(K)=ICT(K)+1
      IF(V(  5).LE. 62.00.AND.V(  5).GE.  4.00)ICT(K)=ICT(K)+1
      IF(V(  6).LE. 18.00.AND.V(  6).GE. 13.00)ICT(K)=ICT(K)+1
      IF(V(  7).LE. 76.00.AND.V(  7).GE. 14.00)ICT(K)=ICT(K)+1
      IF(V(  8).LE.  5.00.AND.V(  8).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(  9).LE. 86.00.AND.V(  9).GE. 21.00)ICT(K)=ICT(K)+1
      IF(V( 10).LE. 11.00.AND.V( 10).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 11).LE. 99.00.AND.V( 11).GE. 86.00)ICT(K)=ICT(K)+1
      IF(V( 12).LE.  9.00.AND.V( 12).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 13).LE. 86.00.AND.V( 13).GE. 26.00)ICT(K)=ICT(K)+1
      IF(V( 14).LE. 18.00.AND.V( 14).GE.  5.00)ICT(K)=ICT(K)+1
      IF(V( 15).LE. 42.00.AND.V( 15).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 16).LE. 13.00.AND.V( 16).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 17).LE. 11.00.AND.V( 17).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 18).LE. 34.00.AND.V( 18).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 19).LE. 18.00.AND.V( 19).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 77).LE.  0.00.AND.V( 77).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 78).LE.  0.00.AND.V( 78).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 79).LE.  0.00.AND.V( 79).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 80).LE.  1.00.AND.V( 80).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 81).LE. 90.00.AND.V( 81).GE. 40.00)ICT(K)=ICT(K)+1
      IF(V( 82).LE.  0.00.AND.V( 82).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 83).LE.  0.00.AND.V( 83).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 84).LE. 30.00.AND.V( 84).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 85).LE.  0.00.AND.V( 85).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 86).LE.  0.00.AND.V( 86).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 87).LE. 50.00.AND.V( 87).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 88).LE.  0.00.AND.V( 88).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 89).LE. 53.00.AND.V( 89).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 90).LE. 70.00.AND.V( 90).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 91).LE. 53.00.AND.V( 91).GE.  4.00)ICT(K)=ICT(K)+1
      IF(V( 92).LE. 60.00.AND.V( 92).GE. 10.00)ICT(K)=ICT(K)+1
      IF(V( 93).LE. 50.00.AND.V( 93).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 94).LE.  0.00.AND.V( 94).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 95).LE.  5.00.AND.V( 95).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 96).LE.  0.00.AND.V( 96).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 97).LE.  5.00.AND.V( 97).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 98).LE. 68.00.AND.V( 98).GE. 14.00)ICT(K)=ICT(K)+1
      IF(V( 99).LE.  5.00.AND.V( 99).GE.  0.00)ICT(K)=ICT(K)+1
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      IF(V(100).LE. 86.00.AND.V(100).GE. 16.00)ICT(K)=ICT(K)+1
      IF(V(101).LE.  5.00.AND.V(101).GE.  0.00)ICT(K)=ICT(K)+1

      IF(V(102).LE.  7.00.AND.V(102).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(103).LE.  5.00.AND.V(103).GE.  0.00)ICT(K)=ICT(K)+1
      PCT2(K)=(FLOATF(ICT(K))/46.)*100.
      PRINT 1775,IPER(1),IPER(2)
 1775 FORMAT(25X,*COUNSELING STYLE PROFILE*/36X,*FOR*/26X,A8,* WITH *,A8
     1/)
      PRINT 1779, IHDR
      PRINT 1776
 1776 FORMAT(13X,*CLIENT CENTERED*,5X,* GESTALT*,5X,*RATIONAL EMOTIVE*/)
      PRINT 1777,PCT1(1),PCT1(2),PCT1(3)
 1777 FORMAT(12X,F3.0,13X,F3.0,13X,F3.0////)
      PRINT 1778,IPER(1),IPER(2)
 1778 FORMAT(23X,*COUNSELING EFFECTS PROFILE*/36X,*FOR*/26X,A8,* WITH *,
     1A8/)
      PRINT 1779, IHDR
 1779 FORMAT(/1X,9A8,A7/)
      PRINT 1776
      PRINT 1777,PCT2(1),PCT2(2),PCT2(3)
   99 CONTINUE
      STOP
      END
```

APPENDIX B

RULES FOR KEYPUNCHING DATA

RULES FOR KEYPUNCHING DATA

1. Columns 1 through 8 may be used for card sequence numbers. Generally 4 columns is sufficient. Sequence numbers must be right justified.

2. Each data card must end in a completed word or a blank. Do not attempt to divide a word between cards. If there is not enough room left for a complete word on a card, start the word on the next card.

3. Speaker's names must be preceded and followed by slash (/) symbols. Each time the speaker changes a speaker identification is needed. Example: /ROGERS/

4. Due to limitations in available symbols on a standard keypunch the following substitutes are used:

   a dollar sign ($) is used for a question mark (?)

   a hyphen (-) is used for an apostrophe (')

   a double punch "7/6" is used for an exclamation point (!)

   an asterisk (*) is used for opening (") and closing (") quotation marks.

5. Periods are used only at the end of a sentence. Periods must not be used as punctuation after abbreviations, initials and the like.

APPENDIX C

KEY WORD DICTIONARIES

NEGATIVE AFFECT WORDS

SAD	UNHAPPY	UNHAPPILY	RELUCTANT	DEPRESS
DISTRESS	ANGRY	ANGRILY	ANNOY	FURIOUS
MAD	UPTIGHT	CONFUS	BLOCK	FRUSTRAT
UNLUCKILY	HOPELESS	DISCONTENT	DISCONCERT	PESSIMISTIC
ANXIOUS	AFRAID	HAT	LOATH	LOATHSOME
DISPIS	CRI	CRY	LONESOME	LONELY
NERVOUS	SCAR	PRESSUR	SHY	UPSET
WORRY	WORRI	TENS	DOUBT	PUZZL
SKEPTICAL	STUPID	UNSURE	DISILLUSION	PAINFUL
SHOCK	VICTIM	DEFENSIVE	AGGRESSIVE	NASTY
NASTILY	HARRIED	SUICIDAL	INSECURE	HELPLESS
SORRY	GUILTY	GUILTILY	JEALOUS	BOR
DISTRUST	SUSPICIOUS	DEPRIV	REJECT	DEJECTED
TERRIFI	TERRIFY	REPULSIVE	UNCOMFORTABLE	BULLY
HURT	QUARRELSOME	BUG	BUGG	DISSATISFI
DISSATISFY	DISAPPOINT	HARRASS	CONCERN	FRIGHTEN
PHONY	INDECISION	FAILURE	FLUNK	MEDIOCRE
MOODY	BLUFF	DISMAY	SADNESS	ALONE
ANXIETI	DISCOURAGE	TERRIBLE	APATHY	PAIN
AVOID	FLEE	ATTACK	OFFENSIVE	ARGUE
COMPETITIVE	CRITICIZE	FIGHT	HIT	KILL
OFFEND	SURLINESS	GRIMNESS	DISLIK	HATE
SERIOUS	ARGU	AGAINST	SHAM	RESENT
ANGER	FEAR	ANXIETY	AGGRESSION	AVOIDANCE
COMPETITION	DEPRESSION	DEPRIVATION	DISILLUSIONMENT	DISAPPOINTMENT
MEDIOCRITY	NERVOUSNESS	OFFENS	PESSIMISM	PREJUDIC
DISCONTENTMENT	DISCOURAGEMENT	DISSATISFACTION	GUILT	HELPLESSNESS
HOPELESSNESS	INSECURITY	JEALOUSY	MURDER	LONELINESS
REJECTION	RELUCTANCE	RESENTMENT	SHYNESS	SUICID
STUPIDITY	DUMB	SURLY	SUSPICION	TENSION
TROUBL	TROUBLESOM	ANNOYANC	HATEFUL	UNINTERESTING
AWFUL	MISS	LOUS	GARBAGE	WRONG
HARSH	TREMOR	ILL	SICK	TIR
STRAIN	TOUCHY	WORSE	WORST	ASHAM
STEW	HORRID	HORRIFI	HORRIFY	DISGUST
FAIL	MADDEN	ASHAMED	FOUGHT	PHONEY
DI	DYING	DEAD	DEATH	SICK
FED	FRUSTRATION	GRIM	MOODINESS	MURDERER
SADDER	SADDEST	SHI	STUPIDEST	SUSPECT
UNHAPPINESS	OPINIONATED	BELLYFUL	LOSER	LOUSY
DISHONEST	STEAL	STOLE	ARGUMENT	LIE
LYING	LIAR	CHEAT	UNFAITHFUL	ADULTERY
SHIT	BULLSHIT	BORRUPT	CORRUPTION	POLLUT
POLLUTION	FRAUD	FRAUDULENT	HASSL	DEFRAUD
DISPLEAS	BOTHER	BAD	UNLUCKY	DUMBEST
REGRET	MEANINGLESS	AGGRAVAT	WORTHLESS	HOSTILE
HOSTILITY	BITTER	CONFUSION	CORRUPTION	DESPAIR
DESPERATION	LEFT-OUT	DISAPPROV	DISAPPROVAL	DISGUST
THREATEN	OVERWHELM	IRRITAT	IRRITATION	MISERABLE
FED-UP	INDIGNANT	DESPONDENT	TEED-OFF	DESPONDENCY
APPREHENSIVE	INADEQUATE	FRANTIC	PROVOK	DEGRAD
ALARM	BAFFL	UNEASY	UNEASINESS	PERPLEX
PANICKY	DREADFUL	PANIC	FUTILE	FUTILITY
REVENG	REVENGEFUL	EXASPERAT	INFURIAT	APPALL
HUMILIAT	TRAPPED	SELF-CONSCIOUS	UNACCEPTABLE	POWERLESS
SLUG	SLUT	HYPOCRITE	HYPOCRITICAL	CRUMMY
GRUMPY	GROUCH	GROUCHY	ALIENATED	IRRITAT
PROBLEM	DUMBER	APATHETIC		

POSITIVE AFFECT WORDS

HAPPY	HAPPILY	EAGER	EXCIT	ELAT
ECSTATIC	PLEASED	PLEASING	ENJOY	FASCINAT
INTEREST	GETTER	STIMULAT	SURPRISING	WINNER
GREAT	GOOD	CHEERFUL	DELIGHT	CONTENT
THRILL	HOP	LUCKY	LUCKILY	OPTIMISTIC
COMFORTABLE	CHEERY	CHEERILY	LOV	APPRECIAT
LAUGH	JOY	SATISFY	SATISFI	SECURE
FAITH	CONFIDENT	CONFIDENCE	MOTIVAT	TRUST
SUCCESS	ACCEPT	JOYOUS	ATTRACTIVE	CALM
PEACEFUL	TRANQUIL	BEAUTIFUL	SUPERB	EXQUISITE
ENCOURAG	ENJOYMENT	PLEASURE	NICE	FUN
RELAX	SURPRIS	TERRIFIC	TREMENDOUS	WONDERFUL
ECSTACY	ABLE	PERFECT	FULFILL	POTENTIAL
WORTH	AFFECTION	CLOSE	FRIENDLY	RESPECT
LIBERAT	HAPPINESS	PEACE	ENTHUSIASM	CHEERFULNESS
AFFECTIONAT	APPRECIATIVE	ATTRACTIVENESS	CALMNESS	CLOSENESS
COMFORT	CONTENTMENT	BRIGHT	SMART	EAGERNESS
ENCOURAGEMENT	FULFILLMENT	GOODNESS	GREATNESS	HOPEFUL
MOTIVATION	OPTIMISM	PEACEFULNESS	TRANQUILITY	PERFECTION
PLEASURABLE	POTENTIALITY	APTITUDE	ABILITY	RELAXATION
RESPECTABLE	RESPECTFUL	SATISFACTION	SECURITY	STIMULATION
SUCCESSFUL	LOVABLE	DELIGHTFUL	CUTE	CUTIE
NEATEST	PLEASES	SMARTER	SMARTEST	HONEST
HONESTY	HONOR	RICH	RICHER	RICHEST
ATTRACT	ADVANTAG	BETTER	BEST	GLAD
FIN	GRATIFY	FANTASTIC	BEAUTY	GORGEOUS
FINEST	DOLL	PEACHY	DESIRABLE	ACCEPTABLE
DISTINGUISHED	NEAT	DESIR	WISH	SWEET
MOTHERLY	ELIGIBLE	ABILITI	BEAUTI	BRIGHTER
BRIGHTEST	CALMER	CALMEST	ECSTACI	FRIEND
FRIENDLINESS	FRIENDSHIP	FUNNY	GREATER	GREATEST
HAPPIER	HAPPIEST	NICER	NICEST	NEATER
RELIEF	RELIEV	PRIDE	PROUD	GRATEFUL
GRATIFI	GRATIFING	GRATIFICATION	MAGNIFICENT	GROOVY
KIND	GENTLE	ENTHUSIASTIC		

COGNITIVE WORDS

THINK	THOUGHT	NONSENSE	REASONABLE	REASONABLY
SOLV	SOLUTION	BAUS	BECAUSE	DECID
REASONABLENESS	FIGUR	AFFECT	AFFECT	LOGIC
LOGICAL	COGITAT	PONDER	SUPPOS	EXPECT
GUESS	CONJUR	CONSIDER	RECKON	DEEM
BELIEVE	CONTEMPLAT	REFLECT	CONCEIV	REGARD
APPREHEND	PURPOSEFUL	ESTEEM	DELIBERAT	STUDY
SPECULAT	STUDI	REASON	RUMINAT	UNDERSTAND
COMPREHEND	CONCEPT	CONCEPTION	SUPPOSITION	OPINION
IDEA	PLAN	NOTION	PROVISION	COGITATION
MEDITATION	JUDGMENT	DESIGN	PURPOSE	INTENTION
DELIBERATION	MEDITATIVE	COGNITIVE	PHILOSOPHIC	STUDIOUS
INTROSPECTIVE	EXPLANATION	MOTIV	PROOF	READ
RATIONALITY	JUSTICE	ORDER	RATIONALE	RATIONAL
PROBABLE	JUDICIOUS	SENSIBLE	PRUDENT	PRINCIPLE
ENUMERAT	CONSEQUENCE	RESULT	CONSEQUENTLY	ACCORDING
DETERMIN	ADJUDICAT	RESOLV	ANALYZ	COMPUT
ACCORDANCE	CONTEXT	CONSIDERATION	RESEARCH	CONTEMPLATION
SEARCH	INTELLIGENT	EXPECTATION	REMEMBER	INTELLIGENCE
FACT	PREDICT	FICTITIOUS	INTROSPECTION	PREDICTABLE
DECISIVE	JUDGMENTAL	DELIBERATION	IMPROBABLE	RESOLVABLE
ACCURATE	INACCURATE	SUM	SUMMARY	CONCLUD
CONCLUSION	DEDUCT	DEDUC	DISTINGUISH	CHARACTERISTIC
VARI	VARY	DIFFERENCE	QUOTIENT	MULTIPLY
MULTIPLI	SUPPOSITION	HYPOTHESIS	BELIEF	CAUSATION
COMPUTER	CONSEQUATE	DECISIVENESS	EXPLAIN	FACTUAL
MEDITAT	NONSENSICAL	PHILOSOPHY	PHILOSOPHI	PHILOSOPHIZ
PLAN	PROV	READER	SOUGHT	THINKER
PHILOSOPHER	UNDERSTOOD	SCIENCE	SCIENTIFIC	INDUCTIVE
DEDUCTIVE	EVIDENCE	EVIDENT	FORMULA	FORMULATION
CORRECT	CORRELAT	CORRELATION	ANALYSIS	ANALYSES
DISCREPANCY	DISCREPANCIES	DEFINITION	DEFINITIONAL	REINFORC
REINFORCEMENT	CONSISTENT	INCONSISTENT	PRODUCTIVE	ROLE
DISCLOSURE	CONTINGENT	CONTINGENCY	CONTINGENCIES	INDOCTRINAT
INDOCTRINATION	REINDOCTRINAT	MANIFESTATION	NURTURE	AUTHENTIC
PHYSIOLOGICAL	PSYCHOLOGICAL	MALADAPTIVE	RELEVANT	RELEVANCE
IRRELEVANT	IMPERATIVE	DECLARATIVE	INTERROGATIVE	DECISION
INDECISION	INDECISIVE			

SCHOOL REFERENCE WORDS

INSTRUCTOR	PROFESSOR	PROF	TEACHER	ADVISER
COACH	STUDENT	TEST	QUIZ	EXAM
EXAMINATION	MIDTERM	FINAL	MARK	GRADE
CUM	CREDIT	SEMESTER	B	C
D	F	INCOMPLETE	LECTURE	LABORATORY
LAB	MODULE	MOD	COURSE	CLASS
STUDIES	STUDY	PROGRAM	SCHEDULE	REQUIREMENT
ELECTIVE	MAJOR	MINOR	REPORT	PROJECT
ASSIGNMENT	HOMEWORK	UMASS	UNIVERSITY	COLLEGE
SCHOOL	CAMPUS	LIBRARY	CLASSROOM	DORMITORY
MONTAGUE	EDUCATION	COUNSELOR	ENGLISH	MATH
MATHEMATICS	SPANISH	FRENCH	GERMAN	RUSSIAN
GRADUATION	ORIENTATION	GOVERNMENT	HISTORY	SOPHOMORE
FRESHMAN	FROSH	GUIDANCE	HOPE	QUIZZES
FRESHMEN	DORMITORIES	LABORATORIES	HISTORIES	

FAMILY REFERENCE WORDS

MOTHER	FATHER	GUARDIAN	STEP-MOTHER	STEP-FATHER
BROTHER	SISTER	STEP-BROTHER	STEP-SISTER	SISTER-IN-LAW
BROTHER-IN-LAW	UNCLE	AUNT	COUSIN	NIECE
NEPHEW	GRANDMOTHER	GRANDFATHER	GRANDPARENT	HOME
HOUSE	FARM	APARTMENT	FLAT	FAMILY
FOLKS	RELATIVES	MOM	DAD	PARENT
DADDY	MOMMY	GRANDMA	GRANDDAD	GRANDPA

APPENDIX D

DECK ARRANGEMENT AND CONTROL CARD WORKSHEETS

DECK ARRANGEMENT FOR RUNNING PROGRAM DISCANAL

1. System cards
2. PROGRAM DISCANAL & SUBROUTINES
3. System cards
4. Control card #1 - Speaker identifications
5. Control card #2 - Format specifications
6. Control card #3 - Title for all analyses
7. Control card #4 - Option selection & subtitle
8. Control card #5 - Master control for individual analysis
9. Control card #6 - Cumulative record specifications
10. Negative affect words card deck
11. Positive affect words card deck
12. Cognitive words card deck
13. School reference words card deck
14. Family reference words card deck
15. Data cards

    If counselor and client identifications are the same in new data deck, use control cards 4, 5 and 6 followed by new data deck; otherwise use control cards 1 thru 6 and follow with new data deck. Each data deck must be followed by an end of file card.

16. End of file card

IBM

FORTRAN Coding Form

PROGRAM: DISCANAL CONTROL CARD WORKSHEET #1

PROGRAMMER: E. W. PEPYNE

DATE: JAN. 1973

COMM.	STATEMENT NUMBER	CONT.	FORTRAN STATEMENT
			CONTROL CARD #1 - SPEAKER IDENTIFICATION CARD
			NAME OF COUNSELOR NAME OF CLIENT
*			
			CONTROL CARD #2 - FORMAT SPECIFICATION CARD
			FORMAT OF VERBAL DATA BEING READ IN (80 COLS. MAX.)
			PROGRAM READS CARD SEQUENCE NUMBER IN "A" FORMAT (8 DIGIT MAX), THEN VERBAL TEXT IN "A1" FORMAT.
			EX. (A4, 1X, 75A1)
D3*			(
			CONTROL CARD #3 - TITLE CARD
			TITLE OF ALL ANALYSES TO BE PROCESSED IN THIS RUN (80 COLS. MAX.)
*			
			CONTROL CARD #4 - OPTION SELECTION AND SUBTITLE CARD
			OPTION SELECTION NUMBER COL. 1.
			SUBTITLE COLS. 2 THRU 80.
*			7

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

*A standard card form. IBM [illegible]

IBM

FORTRAN Coding Form

PROGRAM: DISCANAL CONTROL CARD WORKSHEET #2

PROGRAMMER: E. W. PEPYNE

DATE: JAN. 1973

FORTRAN STATEMENT

CONTROL CARD #5 - MASTER CONTROL FOR EACH SEGMENT OF ANALYIS

Column entries (written vertically above each card field):

- NUM. OF PEOPLE CONVERSING
- 1 = PRINT INPUT TEXT
- 1 = SYMBOLS EXTRACTED 2 = NOT EXTRACTED
- YES = REANALYZE PREVIOUS DATA
- 1 = EXCLUDE WORDS IN PARENS 2 = INCLUDE 3 = INCLUDE & COUNT
- NUMBER OF PARTS TO DIVIDE TEXT
- NUMBER OF TEXT CHARACTERS INPUT PER DATA CARD
- 1 = COMPUTE NUMBER OF SENTENCES AND QUESTIONS 0 = NO
- 1 = USE KEY WORDS FROM PREVIOUS DATA SEGMENT
- NUMBER OF NEGATIVE AFFECT WORDS
- NUMBER OF POSITIVE AFFECT WORDS
- NUMBER OF COGNITIVE WORDS
- NUMBER OF SCHOOL REFERENCE WORDS
- NUMBER OF FAMILY REFERENCE WORDS
- NUMBER OF TOPIC #3 WORDS
- NUMBER OF TOPIC #4 WORDS
- NUMBER OF TOPIC #5 WORDS
- IF ANOTHER DATA SET FOLLOWS THIS ANALYSIS, AND COUNSELOR OR CLIENT IDENTIFICATION DIFFERS, ENTER DIF
- 1 = PUNCH OUTPUT OF SUMMARY DATA

Card: * 2 0 2 | 2 | 0 0 | 0

*A standard card form, IBM electro 888157, is available for punching statements from this form.

IBM

FORTRAN Coding Form

PROGRAM: DISCANAL CONTROL CARD WORKSHEET #3

PROGRAMMER: E. W. PEPYNE DATE: JAN. 1973

FORTRAN STATEMENT

CONTROL CARD #6 - CRITICAL RESPONSE CLASS SPECIFICATIONS FOR CUMMULATIVE RECORD (LEFT JUSTIFY)

PERSON TENSE MODE VALENCE TOPIC

KEY WORD CARDS

FIRST CARD - TITLE OF KEY WORD GROUP CLASSIFICATION (80 COLS. MAX.)

FOLLOWING CARDS (ALL WORDS LEFT JUSTIFIED)

FIRST KEY WORD SECOND KEY WORD THIRD KEY WORD FOURTH KEY WORD

D5

APPENDIX E

SUMMARIES OF CHANGES IN COUNSELOR AND CLIENT VERBAL BEHAVIOR WITHIN COUNSELING INTERVIEWS

SUMMARY OF VARIABLE STATISTICS
FORROGERS

1 CASES VARIABLE	PER 1	PER 2	PER 3	PER 4	PER 5	MEAN	MAX	MIN	RANGE
1 AVE CLAUSE LNGTH	10.6	6.5	3.7	6.5	2.4	14.40	17.09	10.58	6.51
2 PCT. WORDS CONT.	34.0	-12.0	-8.0	-15.0	-8.0	25.40	34.00	19.00	15.00
3 TYPE/TOKEN RATIO	0.4	0.1	-0.0	0.1	0.0	0.44	0.47	0.39	0.08
4 AVE WORD LENGTH	3.9	-0.1	-0.1	0.0	-0.0	3.89	3.95	3.83	0.12
5 PCT CLAUSES CONT	29.0	3.0	3.0	-1.0	3.0	30.60	32.00	28.00	4.00
6 PCT WORDS-5 LET.	18.0	0.0	-2.0	2.0	2.0	18.40	20.00	16.00	4.00
7 PCT. 1ST PERSON	42.0	-1.0	-16.0	-12.0	-17.0	32.80	42.00	25.00	17.00
8 PCT. 2ND PERSON	30.0	2.0	11.0	0.0	16.0	55.80	46.00	30.00	16.00
9 PCT. 3RD PERSON	27.0	0.0	5.0	13.0	2.0	31.20	40.00	27.00	13.00
10 PCT. PAST TENSE	0.0	9.0	4.0	0.0	4.0	3.40	9.00	0.00	9.00
11 PCT PRESENT TNS	94.0	-3.0	-1.0	5.0	2.0	94.60	99.00	91.00	8.00
12 PCT FUTURE TNS	6.0	-6.0	-2.0	-6.0	-6.0	2.00	6.00	0.00	6.00
13 PCT NEUT MODE	35.0	9.0	12.0	-1.0	-4.0	39.20	45.00	32.00	16.00
14 PCT COGNATE MP	3.0	2.0	4.0	7.0	8.0	7.20	11.00	3.00	8.00
15 PCT AFFECTIVE MP	44.0	-21.0	-11.0	-3.0	-5.0	40.00	48.00	27.00	21.00
16 PCT MIXED MODE	12.0	11.0	-5.0	-2.0	2.0	13.20	23.00	7.00	16.00
17 PCT POSITIVE V	21.0	-6.0	-17.0	1.0	-6.0	18.40	25.00	7.00	18.00
18 PCT NEGATIVE V	21.0	-12.0	-6.0	-16.0	-7.0	12.80	21.00	5.00	16.00
19 PCT MIXED V	12.0	6.0	3.0	8.0	-5.0	14.40	20.00	7.00	13.00
20 PCT SCHOOL REF	0.0	0.0	4.0	5.0	0.0	1.80	5.00	0.00	5.00
21 PCT FAMILY REF	3.0	5.0	4.0	0.0	11.0	4.00	11.00	0.00	11.00
22 PCT COMBINATION	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
23 PAST/2ST/AFF/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
24 PAST/2ND/AFF/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
25 PAST/3RD/AFF/POS	0.0	0.0	4.0	0.0	0.0	0.80	4.00	0.00	4.00
26 PRES/1ST/AFF/POS	12.0	-12.0	-12.0	-7.0	-1.0	5.60	12.00	0.00	12.00
27 PRES/2ND/AFF/POS	6.0	3.0	-6.0	9.0	5.0	8.20	15.00	0.00	15.00
28 PRES/3RD/AFF/POS	9.0	-4.0	-9.0	-4.0	-5.0	4.60	9.00	0.00	9.00
29 FUT/1ST/AFF/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
30 FUT/2ND/AFF/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
31 FUT/3RD/AFF/POS	0.0	0.0	4.0	0.0	0.0	0.80	4.00	0.00	4.00
32 PAST/1ST/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
33 PAST/2ND/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
34 PAST/3RD/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
35 PRES/1ST/AFF/MIX	6.0	-6.0	-6.0	-6.0	-6.0	1.20	6.00	0.00	6.00
36 PRES/2ND/AFF/MIX	0.0	0.0	7.0	10.0	4.0	4.20	10.00	0.00	10.00
37 PRES/3RD/AFF/MIX	0.0	5.0	0.0	0.0	0.0	1.00	5.00	0.00	5.00
38 FUT/1ST/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
39 FUT/2ND/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
40 FUT/3RD/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
41 PAST/1ST/AFF/NEG	0.0	5.0	0.0	0.0	0.0	1.00	5.00	0.00	5.00
42 PAST/2ND/AFF/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
43 PAST/3RD/AFF/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
44 PRES/1ST/AFF/NEG	6.0	-6.0	-2.0	-1.0	-6.0	3.00	6.00	0.00	6.00
45 PRES/2ND/AFF/NEG	12.0	-12.0	-5.0	-12.0	-8.0	4.60	12.00	0.00	12.00
46 PRES/3RD/AFF/NEG	0.0	5.0	7.0	0.0	7.0	3.80	7.00	0.00	7.00
47 FUT/1ST/AFF/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
48 FUT/2ND/AFF/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
49 FUT/3RD/AFF/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
50 PAST/1ST/MIX/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
51 PAST/2ND/MIX/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
52 PAST/3RD/MIX/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
53 PRES/1ST/MIX/POS	0.0	5.0	0.0	0.0	0.0	1.00	5.00	0.00	5.00
54 PRES/2ND/MIX/POS	0.0	0.0	0.0	5.0	0.0	1.00	5.00	0.00	5.00
55 PRES/3RD/MIX/POS	3.0	-3.0	-3.0	-3.0	-3.0	0.60	3.00	0.00	3.00
56 FUT/1ST/MIX/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
57 FUT/2ND/MIX/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
58 FUT/3RD/MIX/POS	30.0	0.0	0.0	0.0	0.0	30.00	30.00	30.00	0.00

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59	PAST/1ST/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
60	PAST/2ND/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
61	PAST/3RD/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
62	PRES/1ST/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
63	PRES/2ND/MIX/MIX	0.0	50.0	0.0	0.0	0.0	10.00	50.00	0.00	50.00
64	PRES/3RD/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
65	FUT/1ST/MIX/MIX	30.0	-30.0	-30.0	-30.0	-30.0	6.00	30.00	0.00	30.00
66	FUT/2ND/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
67	FUT/3RD/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
68	PAST/1ST/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
69	PAST/2ND/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
70	PAST/3RD/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
71	PRES/1ST/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
72	PRES/2ND/MIX/NEG	0.0	50.0	40.0	0.0	0.0	18.00	50.00	0.00	50.00
73	PRES/3RD/MIX/NEG	0.0	0.0	0.0	0.0	70.0	14.00	70.00	0.00	70.00
74	FUT/1ST/MIX/NEG	30.0	-30.0	-30.0	-30.0	-30.0	6.00	30.00	0.00	30.00
75	FUT/2ND/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
76	FUT/3RD/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
77	PAST/1ST/COGNATE	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
78	PAST/2ND/COGNATE	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
79	PAST/3RD/COGNATE	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
80	PRES/1ST/COGNATE	0.0	0.0	0.0	1.0	0.0	0.20	1.00	0.00	1.00
81	PRES/2ND/COGNATE	0.0	50.0	70.0	0.0	70.0	38.00	70.00	0.00	70.00
82	PRES/3RD/COGNATE	30.0	-30.0	-30.0	-30.0	40.0	20.00	70.00	0.00	70.00
83	FUT/1ST/COGNATE	0.0	0.0	0.0	50.0	0.0	10.00	50.00	0.00	50.00
84	FUT/2ND/COGNATE	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
85	FUT/3RD/COGNATE	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
86	PAST/1ST/NEUTRAL	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
87	PAST/2ND/NEUTRAL	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
88	PAST/3RD/NEUTRAL	0.0	50.0	0.0	0.0	40.0	18.00	50.00	0.00	50.00
89	PRES/1ST/NEUTRAL	1.0	0.0	0.0	0.0	-1.0	0.80	1.00	0.00	1.00
90	PRES/2ND/NEUTRAL	80.0	1.0	-68.0	-80.0	-9.0	48.80	81.00	0.00	81.00
91	PRES/3RD/NEUTRAL	60.0	21.0	1.0	-57.0	-49.0	43.20	81.00	3.00	78.00
92	FUT/1ST/NEUTRAL	60.0	-20.0	30.0	-60.0	20.0	54.00	90.00	0.00	90.00
93	FUT/2ND/NEUTRAL	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
94	FUT/3RD/NEUTRAL	30.0	-30.0	-30.0	-30.0	-30.0	6.00	30.00	0.00	30.00
95	PAST 1ST PERSON	0.0	5.0	0.0	0.0	0.0	1.00	5.00	0.00	5.00
96	PAST 2ND PERSON	0.0	5.0	0.0	0.0	4.0	1.80	5.00	0.00	5.00
97	PAST 3RD PERSON	0.0	0.0	4.0	0.0	0.0	0.80	4.00	0.00	4.00
98	PRES 1ST PERSON	42.0	-6.0	-16.0	-12.0	-17.0	31.80	42.00	25.00	17.00
99	PRES 2ND PERSON	27.0	0.0	14.0	3.0	16.0	33.60	43.00	27.00	16.00
100	PRES 3RD PERSON	24.0	3.0	2.0	16.0	5.0	29.20	40.00	24.00	16.00
101	FUT 1ST PERSON	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
102	FUT 2ND PERSON	3.0	-3.0	-3.0	-3.0	-3.0	0.60	3.00	0.00	3.00
103	FUT 3RD PERSON	3.0	-3.0	1.0	-3.0	-3.0	1.40	4.00	0.00	4.00
104	AFFECT POSITIVE	27.0	-13.0	-20.0	-2.0	-2.0	19.60	27.00	7.00	20.00
105	AFFECT MIXED	6.0	-1.0	1.0	4.0	-2.0	6.40	10.00	4.00	6.00
106	AFFECT NEGATIVE	18.0	-9.0	1.0	-13.0	-7.0	12.40	19.00	5.00	14.00
107	MIXED POSITIVE	3.0	2.0	-3.0	2.0	-3.0	2.60	5.00	0.00	5.00
108	MIXED MIXED	3.0	2.0	-3.0	-3.0	-3.0	1.60	5.00	0.00	5.00
109	MIXED NEGATIVE	3.0	2.0	1.0	-3.0	4.0	3.80	7.00	0.00	7.00
110	COGNITIVE	3.0	2.0	4.0	12.0	11.0	8.80	15.00	3.00	12.00
111	NEUTRAL	36.0	19.0	20.0	4.0	3.0	45.20	56.00	36.00	20.00
112	AFFECTIVE TOTAL	52.0	-25.0	-19.0	-12.0	-13.0	38.20	52.00	27.00	25.00
113	MIXED TOTAL	9.0	5.0	-5.0	-4.0	-2.0	7.80	14.00	4.00	10.00
114	AFFECT+MIXED	61.0	-20.0	-24.0	-16.0	-15.0	46.00	61.00	37.00	24.00
115	M.M.S.	0.0	0.0	0.0	0.0	7.0	1.40	7.00	0.00	7.00
116	ACCENT	0.0	0.0	0.0	5.0	0.0	1.00	5.00	0.00	5.00
117	RESTATEMENT	3.0	2.0	-3.0	2.0	-3.0	2.60	5.00	0.00	5.00
118	REFLECTION-SIMPL	24.0	8.0	6.0	1.0	5.0	28.00	32.00	24.00	8.00
119	REFLECTION-CONFR	3.0	11.0	-3.0	2.0	4.0	5.80	14.00	0.00	14.00
120	REFLECTION-CAUSA	3.0	-3.0	-3.0	2.0	1.0	2.40	5.00	0.00	5.00
121	INFORMATIONAL	15.0	8.0	11.0	10.0	3.0	21.40	26.00	15.00	11.00
	IMPERATIVE	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00

123 PROBE-SIMPLE	9.0	0.0	6.0	1.0	2.0	10.80	15.00	9.00	6.0
124 PROBE-RHETORICAL	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
125 ABILITY POTENTIA	0.0	0.0	4.0	0.0	4.0	1.60	4.00	0.00	4.00
126 SELF REFERENCE	33.0	-15.0	-7.0	-13.0	-19.0	22.20	33.00	14.00	19.00
127 JOINT IMPERATIVE	0.0	0.0	0.0	0.0	4.0	0.80	4.00	0.00	4.00
128 3RD PERSON INFO	0.0	-9.0	-9.0	-9.0	-5.0	2.60	9.00	0.00	9.00
129 M.M.S. WORDS	0.0	0.0	0.0	0.0	1.0	0.20	1.00	0.00	1.00
130 ACCENT WORDS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
131 RESTATE-WORDS	8.0	-6.0	-8.0	-6.0	-8.0	2.40	8.00	0.00	8.00
132 REFL=SIMP WORDS	11.0	9.0	9.3	15.0	2.4	18.13	26.00	11.00	15.00
133 REFL=CONFR WORDS	7.0	9.3	-7.0	9.0	14.0	12.07	21.00	0.00	21.00
134 REFLECT-CAU WORD	8.0	-8.0	-8.0	0.0	6.0	6.00	14.00	0.00	14.00
135 INFO WORDS	13.2	-1.6	-4.3	2.8	-3.0	11.97	16.00	8.86	7.14
136 IMPERAT WORDS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
137 PROBE-S WORDS	5.0	8.0	8.5	12.0	14.3	13.57	19.33	5.00	14.33
138 PROBE-RHET WORDS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
139 ABIL POT WORDS	0.0	0.0	6.0	0.0	33.0	7.80	33.00	0.00	33.00
140 SELF REF WORDS	11.6	13.6	2.8	6.1	-4.9	15.16	25.25	6.75	18.50
141 JOINT IMP WORDS	0.0	0.0	0.0	0.0	12.0	2.40	12.00	0.00	12.00
142 3RD PER INFO WDS	9.7	-9.7	-9.7	-9.7	8.3	5.53	18.00	0.00	18.00

SUMMARY OF VARIABLE STATISTICS
FORGLORIA

CLAUSES

VARIABLE	PER 1	PER 2	PER 3	PER 4	PER 5	MEAN	MAX	MIN	RANGE
1 AVE CLAUSE LNGTH	13.2	-3.1	-2.2	-3.2	-3.5	10.78	13.17	9.65	3.52
2 PCT. WORDS CONT.	66.0	12.0	8.0	15.0	8.0	74.60	81.00	66.00	15.00
3 TYPE/TOKEN RATIO	0.3	0.0	-0.0	0.0	0.0	0.31	0.32	0.30	0.02
4 AVE WORD LENGTH	3.6	0.0	-0.0	0.2	0.1	3.67	3.80	3.60	0.20
5 PCT CLAUSES CONT	71.0	-3.0	-3.0	1.0	-3.0	69.40	72.00	68.00	4.00
6 PCT WORDS-5 LET.	13.0	3.0	-1.0	5.0	4.0	15.20	18.00	12.00	6.00
7 PCT. 1ST PERSON	78.0	-14.0	-14.0	-16.0	-17.0	65.80	78.00	61.00	17.00
8 PCT. 2ND PERSON	3.0	0.0	4.0	3.0	3.0	5.00	7.00	3.00	4.00
9 PCT. 3RD PERSON	19.0	15.0	10.0	13.0	14.0	29.40	34.00	19.00	15.00
10 PCT. PAST TENSE	16.0	-13.0	-13.0	-8.0	-6.0	8.00	16.00	3.00	13.00
11 PCT PRESENT TNS	84.0	7.0	9.0	6.0	5.0	89.40	93.00	84.00	9.00
12 PCT FUTURE TNS	0.0	6.0	4.0	2.0	1.0	2.60	6.00	0.00	6.00
13 PCT NEUT MODE	30.0	20.0	21.0	26.0	19.0	47.20	56.00	30.00	26.00
14 PCT COGNATE MD	3.0	0.0	0.0	0.0	6.0	4.20	9.00	3.00	6.00
15 PCT AFFECTIVE MD	48.0	-8.0	-8.0	-17.0	-10.0	39.40	48.00	31.00	17.00
16 PCT MIXED MODE	19.0	-11.0	-12.0	-10.0	-15.0	9.40	19.00	4.00	15.00
17 PCT POSITIVE V	14.0	4.0	1.0	-4.0	4.0	15.00	18.00	10.00	8.00
18 PCT NEGATIVE V	34.0	-18.0	-19.0	-17.0	-24.0	18.40	34.00	10.00	24.00
19 PCT MIXED V	19.0	-16.0	-14.0	-10.0	-6.0	9.80	19.00	3.00	16.00
20 PCT SCHOOL REF	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
21 PCT FAMILY REF	5.0	-1.0	2.0	-4.0	4.0	5.20	9.00	1.00	8.00
22 PCT CONFIRMATION	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
23 PAST/2ST/AFF/POS	2.0	-1.0	-2.0	-2.0	-1.0	0.80	2.00	0.00	2.00
24 PAST/2ND/AFF/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
25 PAST/3RD/AFF/POS	2.0	-2.0	-2.0	-2.0	-2.0	0.40	2.00	0.00	2.00
26 PRES/1ST/AFF/POS	8.0	2.0	5.0	1.0	6.0	10.80	14.00	8.00	6.00
27 PRES/2ND/AFF/POS	0.0	1.0	1.0	0.0	0.0	0.40	1.00	0.00	1.00
28 PRES/3RD/AFF/POS	0.0	3.0	3.0	1.0	5.0	2.40	5.00	0.00	5.00
29 FUT/1ST/AFF/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
30 FUT/2ND/AFF/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
31 FUT/3RD/AFF/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
32 PAST/1ST/AFF/MIX	0.0	0.0	0.0	0.0	3.0	0.60	3.00	0.00	3.00
33 PAST/2ND/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
34 PAST/3RD/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
35 PRES/1ST/AFF/MIX	9.0	-8.0	-9.0	-9.0	-6.0	2.60	9.00	0.00	9.00
36 PRES/2ND/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
37 PRES/3RD/AFF/MIX	0.0	0.0	0.0	1.0	3.0	0.80	3.00	0.00	3.00
38 FUT/1ST/AFF/MIX	0.0	0.0	0.0	1.0	0.0	0.20	1.00	0.00	1.00
39 FUT/2ND/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
40 FUT/3RD/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
41 PAST/1ST/AFF/NEG	3.0	-3.0	-3.0	-3.0	-3.0	0.60	3.00	0.00	3.00
42 PAST/2ND/AFF/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
43 PAST/3RD/AFF/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
44 PRES/1ST/AFF/NEG	16.0	-7.0	-4.0	-6.0	-11.0	10.40	16.00	5.00	11.00
45 PRES/2ND/AFF/NEG	0.0	1.0	1.0	0.0	0.0	0.40	1.00	0.00	1.00
46 PRES/3RD/AFF/NEG	3.0	1.0	-2.0	0.0	1.0	3.00	4.00	1.00	3.00
47 FUT/1ST/AFF/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
48 FUT/2ND/AFF/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
49 FUT/3RD/AFF/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
50 PAST/1ST/MIX/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
51 PAST/2ND/MIX/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
52 PAST/3RD/MIX/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
53 PRES/1ST/MIX/POS	3.0	0.0	-3.0	-2.0	-3.0	1.40	3.00	0.00	3.00
54 PRES/2ND/MIX/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
55 PRES/3RD/MIX/POS	0.0	1.0	0.0	1.0	0.0	0.40	1.00	0.00	1.00
56 FUT/1ST/MIX/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
57 FUT/2ND/MIX/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
58 FUT/3RD/MIX/POS	30.0	0.0	0.0	0.0	0.0	30.00	30.00	30.00	0.00

59	PAST/1ST/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
60	PAST/2ND/MIX/MIX	0.0	0.0	0.0	10.0	0.0	2.00	10.00	0.00	10.00
61	PAST/3RD/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
62	PRES/1ST/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
63	PRES/2ND/MIX/MIX	20.0	-20.0	10.0	-10.0	-20.0	12.00	30.00	0.00	30.00
64	PRES/3RD/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
65	FUT/1ST/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
66	FUT/2ND/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
67	FUT/3RD/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
68	PAST/1ST/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
69	PAST/2ND/MIX/NEG	20.0	-20.0	-10.0	-20.0	-20.0	6.00	20.00	0.00	20.00
70	PAST/3RD/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
71	PRES/1ST/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
72	PRES/2ND/MIX/NEG	80.0	-70.0	-70.0	-50.0	-50.0	32.00	80.00	10.00	70.00
73	PRES/3RD/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
74	FUT/1ST/MIX/NEG	50.0	-40.0	-50.0	-30.0	-50.0	16.00	50.00	0.00	50.00
75	FUT/2ND/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
76	FUT/3RD/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
77	PAST/1ST/COGNATE	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
78	PAST/2ND/COGNATE	20.0	-20.0	-20.0	-10.0	-10.0	8.00	20.00	0.00	20.00
79	PAST/3RD/COGNATE	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
80	PRES/1ST/COGNATE	0.0	0.0	0.0	0.0	10.0	2.00	10.00	0.00	10.00
81	PRES/2ND/COGNATE	50.0	-20.0	-20.0	-50.0	0.0	32.00	50.00	0.00	50.00
82	PRES/3RD/COGNATE	0.0	0.0	0.0	0.0	10.0	2.00	10.00	0.00	10.00
83	FUT/1ST/COGNATE	0.0	0.0	10.0	20.0	0.0	6.00	20.00	0.00	20.00
84	FUT/2ND/COGNATE	0.0	0.0	0.0	0.0	10.0	2.00	10.00	0.00	10.00
85	FUT/3RD/COGNATE	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
86	PAST/1ST/NEUTRAL	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
87	PAST/2ND/NEUTRAL	30.0	-20.0	-30.0	20.0	0.0	24.00	50.00	0.00	50.00
88	PAST/3RD/NEUTRAL	0.0	0.0	0.0	0.0	10.0	2.00	10.00	0.00	10.00
89	PRES/1ST/NEUTRAL	31.0	-28.0	-19.0	-19.0	-29.0	12.00	31.00	2.00	29.00
90	PRES/2ND/NEUTRAL	70.0	-60.0	10.0	20.0	-40.0	56.00	90.00	10.00	80.00
91	PRES/3RD/NEUTRAL	30.0	-28.0	12.0	31.0	12.0	35.40	61.00	2.00	59.00
92	FUT/1ST/NEYTRAL	60.0	-30.0	-50.0	20.0	-60.0	36.00	80.00	0.00	80.00
93	FUT/2ND/NEUTRAL	0.0	40.0	30.0	0.0	0.0	14.00	40.00	0.00	40.00
94	FUT/3RD/NEUTRAL	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
95	PAST 1ST PERSON	11.0	-8.0	-10.0	-4.0	-3.0	6.00	11.00	1.00	10.00
96	PAST 2ND PERSON	0.0	0.0	0.0	0.0	1.0	0.20	1.00	0.00	1.00
97	PAST 3RD PERSON	5.0	-5.0	-4.0	-4.0	-4.0	1.60	5.00	0.00	5.00
98	PRES 1ST PERSON	67.0	-9.0	-7.0	-13.0	-15.0	58.20	67.00	52.00	15.00
99	PRES 2ND PERSON	3.0	0.0	4.0	3.0	2.0	4.80	7.00	3.00	4.00
100	PRES 3RD PERSON	14.0	17.0	13.0	16.0	18.0	26.80	32.00	14.00	18.00
101	FUT 1ST PERSON	0.0	4.0	3.0	1.0	1.0	1.80	4.00	0.00	4.00
102	FUT 2ND PERSON	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
103	FUT 3RD PERSON	0.0	3.0	1.0	1.0	0.0	1.00	3.00	0.00	3.00
104	AFFECT POSITIVE	11.0	4.0	6.0	-1.0	9.0	14.60	20.00	10.00	10.00
105	AFFECT MIXED	9.0	-8.0	-9.0	-7.0	-1.0	4.00	9.00	0.00	9.00
106	AFFECT NEGATIVE	22.0	-8.0	-7.0	-8.0	-13.0	14.80	22.00	9.00	13.00
107	MIXED POSITIVE	3.0	1.0	-3.0	-1.0	-3.0	1.80	4.00	0.00	4.00
108	MIXED MIXED	2.0	-2.0	1.0	0.0	-2.0	1.40	3.00	0.00	3.00
109	MIXED NEGATIVE	14.0	-11.0	-11.0	-8.0	-11.0	5.80	14.00	3.00	11.00
110	COGNITIVE	6.0	-3.0	-2.0	-3.0	4.0	5.20	10.00	3.00	7.00
111	NEUTRAL	33.0	28.0	26.0	27.0	18.0	52.80	61.00	33.00	28.00
112	AFFECTIVE TOTAL	42.0	-12.0	-10.0	-16.0	-5.0	33.40	42.00	26.00	16.00
113	MIXED TOTAL	19.0	-13.0	-14.0	-9.0	-16.0	8.60	19.00	3.00	16.00
114	AFFECT+MIXED	61.0	-25.0	-24.0	-24.0	-22.0	42.00	61.00	36.00	25.00

SUMMARY OF VARIABLE STATISTICS
FORPERLS

LAUSES

	VARIABLE	PER 1	PER 2	PER 3	PER 4	PER 5	MEAN	MAX	MIN	RANGE
1	AVE CLAUSE LNGTH	6,1	-0,3	0,7	0,7	1,4	6,63	7,51	5,86	1,65
2	PCT, WORDS CONT,	48,0	2,0	-7,0	-3,0	-4,0	45,60	50,00	41,00	9,00
3	TYPE/TOKEN RATIO	0,4	0,0	0,1	0,1	-0,0	0,40	0,44	0,36	0,08
4	AVE WORD LENGTH	3,6	0,2	0,2	0,1	0,2	3,78	3,87	3,63	0,24
5	PCT CLAUSES CONT	44,0	-3,0	-4,0	-9,0	0,0	40,80	44,00	35,00	9,00
6	PCT WORDS-5 LET,	14,0	1,0	5,0	2,0	2,0	16,00	19,00	14,00	5,00
7	PCT, 1ST PERSON	10,0	10,0	15,0	18,0	16,0	21,80	28,00	10,00	18,00
8	PCT, 2ND PERSON	67,0	-30,0	-27,0	-13,0	-20,0	49,00	67,00	37,00	30,00
9	PCT, 3RD PERSON	24,0	19,0	11,0	-6,0	4,0	29,60	43,00	18,00	25,00
10	PCT, PAST TENSE	4,0	6,0	-1,0	9,0	0,0	6,80	13,00	3,00	10,00
11	PCT PRESENT TNS	94,0	-4,0	4,0	-7,0	2,0	93,00	98,00	87,00	11,00
12	PCT FUTURE TNS	2,0	-2,0	-2,0	-2,0	-2,0	0,40	2,00	0,00	2,00
13	PCT NEUT MODE	71,0	0,0	-16,0	-7,0	-9,0	64,60	71,00	55,00	16,00
14	PCT COGNATE MD	4,0	4,0	6,0	-1,0	2,0	6,20	10,00	3,00	7,00
15	PCT AFFECTIVE MD	24,0	-4,0	4,0	9,0	6,0	27,00	33,00	20,00	13,00
16	PCT MIXED MODE	2,0	-2,0	6,0	-2,0	0,0	2,40	8,00	0,00	8,00
17	PCT POSITIVE V	6,0	-4,0	4,0	7,0	0,0	7,40	13,00	2,00	11,00
18	PCT NEGATIVE V	18,0	-8,0	5,0	-3,0	-3,0	16,20	23,00	10,00	13,00
19	PCT MIXED V	0,0	0,0	0,0	10,0	17,0	5,40	17,00	0,00	17,00
20	PCT SCHOOL REF	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
21	PCT FAMILY REF	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
22	PCT COMBINATION	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
23	PAST/2ST/AFF/POS	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
24	PAST/2ND/AFF/POS	0,0	0,0	0,0	3,0	0,0	0,60	3,00	0,00	3,00
25	PAST/3RD/AFF/POS	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
26	PRES/1ST/AFF/POS	0,0	2,0	0,0	3,0	0,0	1,00	3,00	0,00	3,00
27	PRES/2ND/AFF/POS	4,0	-4,0	-1,0	1,0	0,0	3,20	5,00	0,00	5,00
28	PRES/3RD/AFF/POS	2,0	-2,0	6,0	1,0	-2,0	2,60	8,00	0,00	8,00
29	FUT/1ST/AFF/POS	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
30	FUT/2ND/AFF/POS	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
31	FUT/3RD/AFF/POS	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
32	PAST/1ST/AFF/MIX	0,0	0,0	0,0	3,0	0,0	0,60	3,00	0,00	3,00
33	PAST/2ND/AFF/MIX	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
34	PAST/3RD/AFF/MIX	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
35	PRES/1ST/AFF/MIX	0,0	0,0	0,0	3,0	0,0	0,60	3,00	0,00	3,00
36	PRES/2ND/AFF/MIX	0,0	0,0	0,0	0,0	6,0	1,20	6,00	0,00	6,00
37	PRES/3RD/AFF/MIX	0,0	0,0	0,0	0,0	2,0	0,40	2,00	0,00	2,00
38	FUT/1ST/AFF/MIX	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
39	FUT/2ND/AFF/MIX	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
40	FUT/3RD/AFF/MIX	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
41	PAST/1ST/AFF/NEG	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
42	PAST/2ND/AFF/NEG	0,0	0,0	3,0	0,0	0,0	0,60	3,00	0,00	3,00
43	PAST/3RD/AFF/NEG	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
44	PRES/1ST/AFF/NEG	0,0	2,0	3,0	8,0	4,0	3,40	8,00	0,00	8,00
45	PRES/2ND/AFF/NEG	10,0	-4,0	-2,0	-5,0	-4,0	7,00	10,00	5,00	5,00
46	PRES/3RD/AFF/NEG	8,0	-6,0	-3,0	-5,0	-4,0	4,40	8,00	2,00	6,00
47	FUT/1ST/AFF/NEG	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
48	FUT/2ND/AFF/NEG	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
49	FUT/3RD/AFF/NEG	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
50	PAST/1ST/MIX/POS	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
51	PAST/2ND/MIX/POS	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
52	PAST/3RD/MIX/POS	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
53	PRES/1ST/MIX/POS	0,0	0,0	0,0	0,0	2,0	0,40	2,00	0,00	2,00
54	PRES/2ND/MIX/POS	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
55	PRES/3RD/MIX/POS	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
56	FUT/1ST/MIX/POS	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
57	FUT/2ND/MIX/POS	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00

58	FUT/3RD/MIX/POS	30.0	0.0	0.0	0.0	0.0	30.00	30.00	30.00	0.00
59	PAST/1ST/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
60	PAST/2ND/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
61	PAST/3RD/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
62	PRES/1ST/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
63	PRES/2ND/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
64	PRES/3RD/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
65	FUT/1ST/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
66	FUT/2ND/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
67	FUT/3RD/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
68	PAST/1ST/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
69	PAST/2ND/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
70	PAST/3RD/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
71	PRES/1ST/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
72	PRES/2ND/MIX/NEG	0.0	0.0	50.0	0.0	0.0	10.00	50.00	0.00	50.00
73	PRES/3RD/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
74	FUT/1ST/MIX/NEG	0.0	0.0	30.0	0.0	0.0	6.00	30.00	0.00	30.00
75	FUT/2ND/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
76	FUT/3RD/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
77	PAST/1ST/COGNATE	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
78	PAST/2ND/COGNATE	0.0	40.0	0.0	0.0	40.0	16.00	40.00	0.00	40.00
79	PAST/3RD/GOGNATE	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
80	PRES/1ST/GOGNATR	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
81	PRES/2ND/COGNATE	20.0	0.0	30.0	-20.0	0.0	22.00	50.00	0.00	50.00
82	PRES/3RD/COGNATE	20.0	-20.0	-20.0	10.0	-20.0	10.00	30.00	0.00	30.00
83	FUT/1ST/COGNATE	0.0	20.0	50.0	0.0	0.0	14.00	50.00	0.00	50.00
84	FUT/2ND/COGNATE	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
85	FUT/3RD/COGNATE	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
86	PAST/1ST/NEUTRAL	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
87	PAST/2ND/NEUTRAL	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
88	PAST/3RD/NEUTRAL	40.0	20.0	-40.0	40.0	-40.0	36.00	80.00	0.00	80.00
89	PRES/1ST/NEUTRAL	0.0	1.0	1.0	1.0	1.0	0.80	1.00	0.00	1.00
90	PRES/2ND/NEUTRAL	64.0	-62.0	-32.0	-31.0	-31.0	32.80	64.00	2.00	62.00
91	PRES/3RD/NEUTRAL	71.0	-28.0	10.0	-60.0	-69.0	41.60	81.00	2.00	79.00
92	FUT/1ST/NEYTRAL	40.0	50.0	10.0	-10.0	-30.0	44.00	90.00	10.00	80.00
93	FUT/2ND/NEUTRAL	20.0	-20.0	-20.0	-20.0	-20.0	4.00	20.00	0.00	20.00
94	FUT/3RD/NEUTRAL	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
95	PAST 1ST PERSON	0.0	4.0	0.0	3.0	4.0	2.20	4.00	0.00	4.00
96	PAST 2ND PERSON	4.0	2.0	-1.0	6.0	-4.0	4.60	10.00	0.00	10.00
97	PAST 3RD PERSON	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
98	PRES 1ST PERSON	8.0	8.0	17.0	18.0	13.0	19.20	26.00	8.00	18.00
99	PRES 2ND PERSON	63.0	-32.0	-25.0	-19.0	-16.0	44.60	63.00	31.00	32.00
100	PRES 3RD PERSON	24.0	19.0	11.0	-6.0	4.0	29.60	43.00	18.00	25.00
101	FUT 1ST PERSON	2.0	-2.0	-2.0	-2.0	-2.0	0.40	2.00	0.00	2.00
102	FUT 2ND PERSON	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
103	FUT 3RD PERSON	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
104	AFFECT POSITIVE	6.0	-4.0	4.0	7.0	-2.0	7.00	13.00	2.00	11.00
105	AFFECT MIXED	0.0	0.0	0.0	5.0	9.0	2.80	9.00	0.00	9.00
106	AFFECT NEGATIVE	18.0	-8.0	0.0	-3.0	-3.0	15.20	18.00	10.00	8.00
107	MIXED POSITIVE	0.0	0.0	0.0	0.0	2.0	0.40	2.00	0.00	2.00
108	MIXED MIXED	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
109	MIXED NEGATIVE	0.0	0.0	8.0	0.0	0.0	1.60	8.00	0.00	8.00
110	COGNITIVE	4.0	4.0	6.0	-1.0	2.0	6.20	10.00	3.00	7.00
111	NEUTRAL	73.0	7.0	-18.0	-9.0	-9.0	67.20	80.00	55.00	25.00
112	AFFECTIVE TOTAL	24.0	-12.0	4.0	9.0	4.0	25.00	33.00	12.00	21.00
113	MIXED TOTAL	0.0	0.0	8.0	0.0	2.0	2.00	8.00	0.00	8.00
114	AFFECT+MIXED	24.0	-12.0	11.0	9.0	6.0	26.80	35.00	12.00	23.00
115	M.M.S.	8.0	2.0	5.0	-5.0	-2.0	8.00	13.00	3.00	10.00
116	ACCENT	2.0	0.0	-2.0	-2.0	-2.0	0.80	2.00	0.00	2.00
117	RESTATEMENT	4.0	-2.0	4.0	-1.0	7.0	5.60	11.00	2.00	9.00
118	REFLECTION-SIMPL	31.0	-15.0	-18.0	-3.0	-18.0	20.20	31.00	13.00	18.00
119	REFLECTION-CONFR	4.0	-4.0	-1.0	-1.0	-4.0	2.00	4.00	0.00	4.00
120	REFLECTION-CAUSA	2.0	-2.0	1.0	-2.0	-2.0	1.00	3.00	0.00	3.00
121	INFORMATIONAL	4.0	25.0	16.	9.0	5.0	15.00	29.00	4.00	25.00

122	IMPERATIVE	4.0	0.0	4.0	9.0	0.0	6.60	13.00	4.00	9.00
123	PROBE-SIMPLE	31.0	-9.0	-16.0	-13.0	5.0	24.40	36.00	15.00	21.00
124	PROBE-RHETORICAL	2.0	-2.0	-2.0	-2.0	-2.0	0.40	2.00	0.00	2.00
125	ABILITY POTENTIA	2.0	-2.0	-2.0	-2.0	0.0	0.80	2.00	0.00	2.00
126	SELF REFERENCE	6.0	6.0	14.0	15.0	13.0	15.60	21.00	6.00	15.00
127	JOINT IMPERATIVE	0.0	2.0	0.0	0.0	0.0	0.40	2.00	0.00	2.00
128	3RD PERSON INFO	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
129	M.M.S. WORDS	1.0	0.0	0.0	0.0	0.0	1.00	1.00	1.00	0.00
130	ACCENT WORDS	2.0	0.0	-2.0	-2.0	-2.0	0.80	2.00	0.00	2.00
131	RESTATE-WORDS	2.5	2.5	2.5	0.5	3.3	4.26	5.80	2.50	3.30
132	REFL-SIMP WORDS	5.9	2.7	5.7	1.9	1.6	8.29	11.60	5.88	5.72
133	REFL-CONER WORDS	6.0	-6.0	10.0	0.0	-6.0	5.60	16.00	0.00	16.00
134	REFLECT-QAU WORD	16.0	-16.0	5.0	-16.0	-16.0	7.40	21.00	0.00	21.00
135	INFO WORDS	7.0	-1.6	-0.4	-1.4	0.3	6.37	7.25	5.36	1.89
136	IMPERAT WORDS	4.5	0.5	-1.8	-0.9	-1.0	3.85	5.00	2.67	2.33
137	PROBE-S WORDS	7.1	-0.7	-0.6	-1.0	1.0	6.88	8.18	6.14	2.04
138	PROBE-RHET WORDS	4.0	-4.0	-4.0	-4.0	-4.0	0.80	4.00	0.00	4.00
139	ABIL POT WORDS	9.0	-9.0	-9.0	-9.0	9.0	5.40	18.00	0.00	18.00
140	SELF REF WORDS	9.7	-2.3	-2.3	0.5	-0.4	8.75	10.13	7.33	2.80
141	JOINT IMP WORDS	0.0	6.0	0.0	0.0	0.0	1.20	6.00	0.00	6.00
142	3RD PER INFO WDS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00

SUMMARY OF VARIABLE STATISTICS
FORGLORIA

LAUSES

VARIABLE	PER 1	PER 2	PER 3	PER 4	PER 5	MEAN	MAX	MIN	RANGE
1 AVE CLAUSE LNGTH	7.2	1.1	-0.1	3.2	0.1	8.09	10.40	7.12	3.28
2 PCT. WORDS CONT.	52.0	-2.0	7.0	3.0	4.0	54.40	59.00	50.00	9.00
3 TYPE/TOKEN RATIO	0.4	-0.0	-0.0	-0.0	-0.0	0.34	0.36	0.32	0.04
4 AVE WORD LENGTH	3.7	-0.1	0.1	0.0	-0.0	3.66	3.79	3.53	0.26
5 PCT CLAUSES CONT	56.0	3.0	4.0	9.0	0.0	59.20	65.00	56.00	9.00
6 PCT WORDS-5 LET.	17.0	-5.0	1.0	-4.0	-5.0	14.40	18.00	12.00	6.00
7 PCT. 1ST PERSON	54.0	5.0	-1.0	4.0	-10.0	53.60	59.00	44.00	15.00
8 PCT. 2ND PERSON	9.0	5.0	12.0	4.0	16.0	16.40	25.00	9.00	16.00
9 PCT. 3RD PERSON	38.0	-11.0	-12.0	-9.0	-7.0	30.20	38.00	26.00	12.00
10 PCT. PAST TENSE	4.0	4.0	-2.0	2.0	4.0	5.60	8.00	2.00	6.00
11 PCT PRESENT TNS	95.0	-3.0	2.0	-1.0	-6.0	93.40	97.00	89.00	8.00
12 PCT FUTURE TNS	2.0	-2.0	0.0	-2.0	1.0	1.40	3.00	0.00	3.00
13 PCT NEUT MODE	50.0	9.0	3.0	-17.0	14.0	51.80	64.00	33.00	31.00
14 PCT COGNATE MD	4.0	2.0	-2.0	-2.0	1.0	3.80	6.00	2.00	4.00
15 PCT AFFECTIVE MD	41.0	-12.0	-7.0	15.0	-16.0	37.00	56.00	25.00	31.00
16 PCT MIXED MODE	5.0	1.0	5.0	3.0	2.0	7.20	10.00	5.00	5.00
17 PCT POSITIVE V	9.0	-5.0	0.0	-1.0	-2.0	7.40	9.00	4.00	5.00
18 PCT NEGATIVE V	23.0	-7.0	-2.0	-6.0	-13.0	17.40	23.00	10.00	13.00
19 PCT MIXED V	4.0	0.0	-1.0	9.0	3.0	6.20	13.00	3.00	10.00
20 PCT SCHOOL REF	0.0	2.0	2.0	0.0	0.0	0.80	2.00	0.00	2.00
21 PCT FAMILY REF	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
22 PCT COMBINATION	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
23 PAST/2ST/AFF/POS	0.0	0.0	0.0	0.0	2.0	0.40	2.00	0.00	2.00
24 PAST/2ND/AFF/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
25 PAST/3RD/AFF/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
26 PRES/1ST/AFF/POS	4.0	-2.0	1.0	-2.0	-2.0	3.00	5.00	2.00	3.00
27 PRES/2ND/AFF/POS	0.0	2.0	0.0	6.0	0.0	1.60	6.00	0.00	6.00
28 PRES/3RD/AFF/POS	4.0	-4.0	-2.0	0.0	-1.0	2.60	4.00	0.00	4.00
29 FUT/1ST/AFF/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
30 FUT/2ND/AFF/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
31 FUT/3RD/AFF/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
32 PAST/1ST/AFF/MIX	2.0	-2.0	-2.0	-2.0	-2.0	0.40	2.00	0.00	2.00
33 PAST/2ND/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
34 PAST/3RD/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
35 PRES/1ST/AFF/MIX	0.0	0.0	0.0	6.0	2.0	1.60	6.00	0.00	6.00
36 PRES/2ND/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
37 PRES/3RD/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
38 FUT/1ST/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
39 FUT/2ND/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
40 FUT/3RD/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
41 PAST/1ST/AFF/NEG	0.0	4.0	0.0	2.0	0.0	1.20	4.00	0.00	4.00
42 PAST/2ND/AFF/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
43 PAST/3RD/AFF/NEG	0.0	2.0	0.0	2.0	0.0	0.80	2.00	0.00	2.00
44 PRES/1ST/AFF/NEG	23.0	-13.0	-9.0	-8.0	-20.0	13.00	23.00	3.00	20.00
45 PRES/2ND/AFF/NEG	0.0	2.0	0.0	0.0	3.0	1.00	3.00	0.00	3.00
46 PRES/3RD/AFF/NEG	2.0	0.0	1.0	0.0	-2.0	1.80	3.00	0.00	3.00
47 FUT/1ST/AFF/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
48 FUT/2ND/AFF/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
49 FUT/3RD/AFF/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
50 PAST/1ST/MIX/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
51 PAST/2ND/MIX/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
52 PAST/3RD/MIX/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
53 PRES/1ST/MIX/POS	2.0	-2.0	-2.0	-2.0	-2.0	0.40	2.00	0.00	2.00
54 PRES/2ND/MIX/POS	0.0	0.0	2.0	0.0	0.0	0.40	2.00	0.00	2.00
55 PRES/3RD/MIX/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
56 FUT/1ST/MIX/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
57 FUT/2ND/MIX/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00

58	FUT/3RD/MIX/POS	30.0	0.0	0.0	0.0	0.0	30.00	30.00	30.00	0.00
59	PAST/1ST/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
60	PAST/2ND/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
61	PAST/3RD/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
62	PRES/1ST/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
63	PRES/2ND/MIX/MIX	0.0	20.0	0.0	0.0	20.0	8.00	20.00	0.00	20.00
64	PRES/3RD/MIX/MIX	0.0	0.0	20.0	0.0	0.0	4.00	20.00	0.00	20.00
65	FUT/1ST/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
66	FUT/2ND/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
67	FUT/3RD/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
68	PAST/1ST/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
69	PAST/2ND/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
70	PAST/3RD/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
71	PRES/1ST/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
72	PRES/2ND/MIX/NEG	0.0	0.0	0.0	40.0	20.0	12.00	40.00	0.00	40.00
73	PRES/3RD/MIX/NEG	20.0	-20.0	10.0	-20.0	-20.0	10.00	30.00	0.00	30.00
74	FUT/1ST/MIX/NEG	0.0	0.0	20.0	0.0	20.0	8.00	20.00	0.00	20.00
75	FUT/2ND/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
76	FUT/3RD/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
77	PAST/1ST/COGNATE	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
78	PAST/2ND/COGNATE	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
79	PAST/3RD/GOGNATE	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
80	PRES/1ST/GOGNATR	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
81	PRES/2ND/COGNATE	0.0	60.0	30.0	40.0	70.0	40.00	70.00	0.00	70.00
82	PRES/3RD/COGNATE	0.0	0.0	20.0	0.0	0.0	4.00	20.00	0.00	20.00
83	FUT/1ST/COGNATE	40.0	-40.0	-40.0	-40.0	-40.0	8.00	40.00	0.00	40.00
84	FUT/2ND/COGNATE	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
85	FUT/3RD/COGNATE	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
86	PAST/1ST/NEUTRAL	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
87	PAST/2ND/NEUTRAL	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
88	PAST/3RD/NEUTRAL	0.0	20.0	20.0	20.0	30.0	18.00	30.00	0.00	30.00
89	PRES/1ST/NEUTRAL	22.0	-19.0	-19.0	-20.0	10.0	12.40	32.00	2.00	30.00
90	PRES/2ND/NEUTRAL	10.0	40.0	0.0	40.0	51.0	36.20	61.00	10.00	51.00
91	PRES/3RD/NEUTRAL	72.0	10.0	19.0	-30.0	10.0	73.80	91.00	42.00	49.00
92	FUT/1ST/NEYTRAL	70.0	-50.0	20.0	-60.0	-70.0	38.00	90.00	0.00	90.00
93	FUT/2ND/NEUTRAL	20.0	-20.0	-20.0	-20.0	-20.0	4.00	20.00	0.00	20.00
94	FUT/3RD/NEUTRAL	0.0	0.0	20.0	0.0	0.0	4.00	20.00	0.00	20.00
95	PAST 1ST PERSON	2.0	2.0	-2.0	0.0	0.0	2.00	4.00	0.00	4.00
96	PAST 2ND PERSON	0.0	2.0	2.0	2.0	3.0	1.80	3.00	0.00	3.00
97	PAST 3RD PERSON	2.0	0.0	-2.0	0.0	1.0	1.80	3.00	0.00	3.00
98	PRES 1ST PERSON	50.0	5.0	3.0	6.0	-7.0	51.40	56.00	43.00	13.00
99	PRES 2ND PERSON	9.0	3.0	8.0	1.0	12.0	13.80	21.00	9.00	12.00
100	PRES 3RD PERSON	36.0	-12.0	-10.0	-9.0	-11.0	27.60	36.00	24.00	12.00
101	FUT 1ST PERSON	2.0	-2.0	-2.0	-2.0	-2.0	0.40	2.00	0.00	2.00
102	FUT 2ND PERSON	0.0	0.0	2.0	0.0	0.0	0.40	2.00	0.00	2.00
103	FUT 3RD PERSON	0.0	0.0	0.0	0.0	3.0	0.60	3.00	0.00	3.00
104	AFFECT POSITIVE	7.0	-3.0	0.0	6.0	0.0	7.60	13.00	4.00	9.00
105	AFFECT MIXED	2.0	-2.0	-2.0	4.0	0.0	2.00	6.00	0.00	6.00
106	AFFECT NEGATIVE	25.0	-5.0	-8.0	-4.0	-18.0	18.00	25.00	7.00	18.00
107	MIXED POSITIVE	2.0	-2.0	0.0	-2.0	-2.0	0.80	2.00	0.00	2.00
108	MIXED MIXED	0.0	2.0	2.0	0.0	2.0	1.20	2.00	0.00	2.00
109	MIXED NEGATIVE	2.0	-2.0	3.0	2.0	1.0	2.80	5.00	0.00	5.00
110	COGNITIVE	4.0	2.0	1.0	0.0	3.0	5.20	7.00	4.00	3.00
111	NEUTRAL	59.0	8.0	3.0	-7.0	15.0	62.80	74.00	52.00	22.00
112	AFFECTIVE TOTAL	34.0	-10.0	-10.0	6.0	-19.0	27.40	40.00	15.00	25.00
113	MIXED TOTAL	4.0	-2.0	5.0	0.0	1.0	4.80	9.00	2.00	7.00
114	AFFECT+MIXED	38.0	-11.0	-5.0	6.0	-18.0	32.40	44.00	20.00	24.00

SUMMARY OF VARIABLE STATISTICS
FORELLIS

E12

CLAUSES

VARIABLE	PER 1	PER 2	PER 3	PER 4	PER 5	MEAN	MAX	MIN	RANGE
1 AVE CLAUSE LNGTH	12.5	1.8	0.2	7.6	4.1	15.23	20.13	12.48	7.65
2 PCT. WORDS CONT.	38.0	21.0	23.0	44.0	34.0	62.40	82.00	38.00	44.00
3 TYPE/TOKEN RATIO	0.5	-0.1	-0.1	-0.1	-0.1	0.42	0.49	0.39	0.10
4 AVE WORD LENGTH	4.4	-0.4	-0.4	-0.8	-0.4	3.97	4.36	3.52	0.84
5 PCT CLAUSES CONT	38.0	28.0	27.0	58.0	38.0	68.20	96.00	38.00	58.00
6 PCT WORDS-5 LET.	26.0	-9.0	-4.0	-9.0	-6.0	20.40	26.00	17.00	9.00
7 PCT. 1ST PERSON	9.0	7.0	5.0	13.0	15.0	17.00	24.00	9.00	15.00
8 PCT. 2ND PERSON	78.0	-44.0	-24.0	-22.0	-25.0	55.00	78.00	34.00	44.00
9 PCT. 3RD PERSON	13.0	37.0	18.0	9.0	11.0	28.00	50.00	13.00	37.00
10 PCT. PAST TENSE	4.0	-1.0	5.0	-4.0	4.0	4.80	9.00	0.00	9.00
11 PCT PRESENT TNS	91.0	6.0	-2.0	0.0	-4.0	91.00	97.00	87.00	10.00
12 PCT FUTURE TNS	4.0	-4.0	-1.0	2.0	1.0	3.60	6.00	0.00	6.00
13 PCT NEUT MODE	39.0	11.0	18.0	24.0	14.0	52.40	63.00	39.00	24.00
14 PCT COGNATE MD	13.0	-7.0	-10.0	-4.0	-8.0	7.20	13.00	3.00	10.00
15 PCT AFFECTIVE MD	26.0	5.0	-6.0	-13.0	6.0	24.40	32.00	13.00	19.00
16 PCT MIXED MODE	22.0	-9.0	-2.0	-6.0	-11.0	16.40	22.00	11.00	11.00
17 PCT POSITIVE V	4.0	9.0	5.0	5.0	20.0	11.80	24.00	4.00	20.00
18 PCT NEGATIVE V	35.0	-16.0	-9.0	-19.0	-24.0	21.40	35.00	11.00	24.00
19 PCT MIXED V	9.0	4.0	-9.0	-3.0	-9.0	5.60	13.00	0.00	13.00
20 PCT SCHOOL REF	0.0	0.0	0.0	6.0	3.0	1.80	6.00	0.00	6.00
21 PCT FAMILY REF	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
22 PCT COMBINATION	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
23 PAST/2ST/AFF/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
24 PAST/2ND/AFF/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
25 PAST/3RD/AFF/POS	0.0	0.0	0.0	0.0	3.0	0.60	3.00	0.00	3.00
26 PRES/1ST/AFF/POS	0.0	9.0	3.0	0.0	3.0	3.00	9.00	0.00	9.00
27 PRES/2ND/AFF/POS	0.0	3.0	0.0	3.0	11.0	3.40	11.00	0.00	11.00
28 PRES/3RD/AFF/POS	0.0	0.0	0.0	0.0	5.0	1.00	5.00	0.00	5.00
29 FUT/1ST/AFF/POS	0.0	0.0	0.0	0.0	3.0	0.60	3.00	0.00	3.00
30 FUT/2ND/AFF/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
31 FUT/3RD/AFF/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
32 PAST/1ST/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
33 PAST/2ND/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
34 PAST/3RD/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
35 PRES/1ST/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
36 PRES/2ND/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
37 PRES/3RD/AFF/MIX	0.0	3.0	0.0	0.0	0.0	0.60	3.00	0.00	3.00
38 FUT/1ST/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
39 FUT/2ND/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
40 FUT/3RD/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
41 PAST/1ST/AFF/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
42 PAST/2ND/AFF/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
43 PAST/3RD/AFF/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
44 PRES/1ST/AFF/NEG	0.0	0.0	0.0	0.0	5.0	1.00	5.00	0.00	5.00
45 PRES/2ND/AFF/NEG	26.0	-26.0	-12.0	-23.0	-21.0	9.60	26.00	0.00	26.00
46 PRES/3RD/AFF/NEG	0.0	13.0	0.0	3.0	3.0	3.80	13.00	0.00	13.00
47 FUT/1ST/AFF/NEG	0.0	0.0	0.0	3.0	0.0	0.60	3.00	0.00	3.00
48 FUT/2ND/AFF/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
49 FUT/3RD/AFF/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
50 PAST/1ST/MIX/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
51 PAST/2ND/MIX/POS	0.0	0.0	3.0	0.0	0.0	0.60	3.00	0.00	3.00
52 PAST/3RD/MIX/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
53 PRES/1ST/MIX/POS	0.0	0.0	0.0	0.0	3.0	0.60	3.00	0.00	3.00
54 PRES/2ND/MIX/POS	4.0	-4.0	-4.0	2.0	-4.0	2.00	6.00	0.00	6.00
55 PRES/3RD/MIX/POS	0.0	0.0	3.0	0.0	0.0	0.60	3.00	0.00	3.00
56 FUT/1ST/MIX/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
FUT/2ND/MIX/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
FUT/3RD/MIX/POS	30.0	0.0	0.0	0.0	0.0	30.00	30.00	30.00	0.00

59	PAST/1ST/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
60	PAST/2ND/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
61	PAST/3RD/MIX/MIX	40.0	-40.0	-40.0	-40.0	-40.0	8.00	40.00	0.00	40.00
62	PRES/1ST/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
63	PRES/2ND/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
64	PRES/3RD/MIX/MIX	0.0	30.0	0.0	30.0	0.0	12.00	30.00	0.00	30.00
65	FUT/1ST/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
66	FUT/2ND/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
67	FUT/3RD/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
68	PAST/1ST/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
69	PAST/2ND/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
70	PAST/3RD/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
71	PRES/1ST/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
72	PRES/2ND/MIX/NEG	0.0	0.0	1.0	0.0	0.0	0.20	1.00	0.00	1.00
73	PRES/3RD/MIX/NEG	40.0	20.0	-30.0	20.0	-10.0	40.00	60.00	10.00	50.00
74	FUT/1ST/MIX/NEG	90.0	-90.0	-60.0	-90.0	-90.0	24.00	90.00	0.00	90.00
75	FUT/2ND/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
76	FUT/3RD/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
77	PAST/1ST/COGNATE	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
78	PAST/2ND/COGNATE	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
79	PAST/3RD/GOGNATE	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
80	PRES/1ST/GOGNATR	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
81	PRES/2ND/COGNATE	40.0	-10.0	-10.0	-10.0	-40.0	26.00	40.00	0.00	40.00
82	PRES/3RD/COGNATE	90.0	-60.0	-90.0	-30.0	-40.0	46.00	90.00	0.00	90.00
83	FUT/1ST/COGNATE	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
84	FUT/2ND/COGNATE	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
85	FUT/3RD/COGNATE	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
86	PAST/1ST/NEUTRAL	0.0	0.0	0.0	30.0	0.0	6.00	30.00	0.00	30.00
87	PAST/2ND/NEUTRAL	0.0	0.0	30.0	0.0	0.0	6.00	30.00	0.00	30.00
88	PAST/3RD/NEUTRAL	0.0	0.0	30.0	0.0	50.0	16.00	50.00	0.00	50.00
89	PRES/1ST/NEUTRAL	0.0	30.0	0.0	0.0	0.0	6.00	30.00	0.00	30.00
90	PRES/2ND/NEUTRAL	42.0	-11.0	-10.0	50.0	40.0	55.80	92.00	31.00	61.00
91	PRES/3RD/NEUTRAL	60.0	33.0	-28.0	21.0	-19.0	61.40	93.00	32.00	61.00
92	FUT/1ST/NEYTRAL	40.0	-30.0	20.0	50.0	-10.0	46.00	90.00	10.00	80.00
93	FUT/2ND/NEUTRAL	0.0	0.0	30.0	30.0	30.0	18.00	30.00	0.00	30.00
94	FUT/3RD/NEUTRAL	40.0	-40.0	-40.0	-40.0	-40.0	8.00	40.00	0.00	40.00
95	PAST 1ST PERSON	0.0	0.0	3.0	0.0	0.0	0.60	3.00	0.00	3.00
96	PAST 2ND PERSON	4.0	-4.0	2.0	-4.0	1.0	3.00	6.00	0.00	6.00
97	PAST 3RD PERSON	0.0	3.0	0.0	0.0	3.0	1.20	3.00	0.00	3.00
98	PRES 1ST PERSON	9.0	7.0	0.0	4.0	9.0	13.00	18.00	9.00	9.00
99	PRES 2ND PERSON	70.0	-36.0	-21.0	-14.0	-23.0	51.20	70.00	34.00	36.00
100	PRES 3RD PERSON	13.0	34.0	18.0	9.0	8.0	26.80	47.00	13.00	34.00
101	FUT 1ST PERSON	0.0	0.0	3.0	6.0	5.0	2.80	6.00	0.00	6.00
102	FUT 2ND PERSON	4.0	-4.0	-4.0	-4.0	-4.0	0.80	4.00	0.00	4.00
103	FUT 3RD PERSON	0.0	0.0	0.0	3.0	0.0	0.60	3.00	0.00	3.00
104	AFFECT POSITIVE	0.0	13.0	3.0	3.0	24.0	8.60	24.00	0.00	24.00
105	AFFECT MIXED	0.0	3.0	0.0	0.0	0.0	0.60	3.00	0.00	3.00
106	AFFECT NEGATIVE	26.0	-13.0	-12.0	-17.0	-13.0	15.00	26.00	9.00	17.00
107	MIXED POSITIVE	4.0	-4.0	2.0	2.0	-1.0	3.80	6.00	0.00	6.00
108	MIXED MIXED	4.0	-1.0	-4.0	-1.0	-4.0	2.00	4.00	0.00	4.00
109	MIXED NEGATIVE	13.0	-7.0	1.0	-7.0	-10.0	8.40	14.00	3.00	11.00
110	COGNITIVE	13.0	-7.0	-10.0	0.0	-8.0	8.00	13.00	3.00	10.00
111	NEUTRAL	39.0	17.0	21.0	20.0	14.0	53.40	60.00	39.00	21.00
112	AFFECTIVE TOTAL	26.0	2.0	-9.0	-13.0	11.0	24.20	37.00	13.00	24.00
113	MIXED TOTAL	22.0	-13.0	-2.0	-6.0	-17.0	14.40	22.00	5.00	17.00
114	AFFECT+MIXED	48.0	-10.0	-11.0	-20.0	-6.0	38.60	48.00	28.00	20.00
115	M.M.S.	4.0	-4.0	-1.0	-1.0	-1.0	2.60	4.00	0.00	4.00
116	ACCENT	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
117	RESTATEMENT	4.0	-4.0	2.0	-4.0	-4.0	2.00	6.00	0.00	6.00
118	REFLECTION-SIMPL	26.0	-23.0	3.0	5.0	-5.0	22.00	31.00	3.00	28.00
119	REFLECTION-CONFR	0.0	3.0	6.0	3.0	0.0	2.40	6.00	0.00	6.00
120	REFLECTION-CAUSA	9.0	-3.0	-6.0	0.0	-4.0	6.40	9.00	3.00	6.00

121	INFORMATIONAL	13.0	25.0	7.0	0.0	3.0	20.00	38.00	13.00	25.00
122	IMPERATIVE	0.0	3.0	3.0	0.0	0.0	1.20	3.00	0.00	3.00
123	PROBE-SIMPLE	13.0	9.0	1.0	-13.0	8.0	14.00	22.00	0.00	22.00
124	PROBE-RHETORICAL	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
125	ABILITY POTENTIA	0.0	0.0	0.0	9.0	5.0	2.80	9.00	0.00	9.00
126	SELF REFERENCE	9.0	7.0	2.0	10.0	9.0	14.60	19.00	9.00	10.00
127	JOINT IMPERATIVE	22.0	-13.0	-16.0	-13.0	-17.0	10.20	22.00	5.00	17.00
128	3RD PERSON INFO	0.0	0.0	0.0	3.0	5.0	1.60	5.00	0.00	5.00
129	M.M.S. WORDS	1.0	-1.0	0.0	0.0	0.0	0.80	1.00	0.00	1.00
130	ACCENT WORDS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
131	RESTATE-WORDS	4.0	-4.0	0.0	-4.0	-4.0	1.60	4.00	0.00	4.00
132	REFL-SIMP WORDS	11.2	2.8	3.3	3.4	8.0	14.68	19.13	11.17	7.96
133	REFL-CONFR WORDS	0.0	13.0	11.5	14.0	0.0	7.70	14.00	0.00	14.00
134	REFLECT-CAU WORD	33.0	-11.0	-8.0	4.0	-6.0	28.80	37.00	22.00	15.00
135	INFO WORDS	17.7	-8.2	-11.0	-4.4	-4.5	12.06	17.67	6.71	10.96
136	IMPERAT WORDS	0.0	14.0	6.0	0.0	0.0	4.00	14.00	0.00	14.00
137	PROBE-S WORDS	10.0	5.0	1.2	-10.0	0.4	9.32	15.00	0.00	15.00
138	PROBE-RHET WORDS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
139	ABIL PCT WORDS	0.0	0.0	0.0	52.3	54.0	21.27	54.00	0.00	54.00
140	SELF REF WORDS	6.0	13.6	10.3	7.8	8.6	14.05	19.60	6.00	13.60
141	JOINT IMP WORDS	10.8	7.2	23.2	12.9	5.2	20.49	34.00	10.80	23.20
142	3RD PER INFO WDS	0.0	0.0	0.0	8.0	9.5	3.50	9.50	0.00	9.50

SUMMARY OF VARIABLE STATISTICS
FORGLORIA

E15

CLAUSES

VARIABLE		PER 1	PER 2	PER 3	PER 4	PER 5	MEAN	MAX	MIN	RANGE
1	AVE CLAUSE LNGTH	12,2	-1,5	-1,2	-8,2	1,1	10,24	13,33	4,00	9,33
2	PCT. WORDS CONT.	62,0	-21,0	-23,0	-44,0	-34,0	37,60	62,00	18,00	44,00
3	TYPE/TOKEN RATIO	0,4	0,0	0,1	0,2	0,2	0,48	0,57	0,37	0,20
4	AVE WORD LENGTH	3,7	-0,2	-0,1	0,5	0,2	3,76	4,18	3,51	0,67
5	PCT CLAUSES CONT	62,0	-28,0	-27,0	-58,0	-38,0	31,80	62,00	4,00	58,00
6	PCT WORDS-5 LET.	15,0	-2,0	3,0	3,0	5,0	16,80	20,00	13,00	7,00
7	PCT. 1ST PERSON	76,0	-21,0	-26,0	-62,0	-29,0	48,40	76,00	14,00	62,00
8	PCT. 2ND PERSON	3,0	-3,0	2,0	-3,0	17,0	5,60	20,00	0,00	20,00
9	PCT. 3RD PERSON	21,0	24,0	24,0	65,0	12,0	46,00	86,00	21,00	65,00
10	PCT. PAST TENSE	11,0	-2,0	-6,0	-11,0	-11,0	5,00	11,00	0,00	11,00
11	PCT PRESENT TNS	87,0	4,0	-1,0	12,0	12,0	92,40	99,00	86,00	13,00
12	PCT FUTURE TNS	3,0	-3,0	6,0	-3,0	-3,0	2,40	9,00	0,00	9,00
13	PCT NEUT MODE	26,0	38,0	38,0	60,0	14,0	56,00	86,00	26,00	60,00
14	PCT COGNATE MD	18,0	-9,0	-13,0	-4,0	2,0	13,20	20,00	5,00	15,00
15	PCT AFFECTIVE MD	42,0	-15,0	-10,0	-42,0	-9,0	26,80	42,00	0,00	42,00
16	PCT MIXED MODE	13,0	-13,0	-13,0	-13,0	-6,0	4,00	13,00	0,00	13,00
17	PCT POSITIVE V	11,0	-6,0	-2,0	-11,0	9,0	9,00	20,00	0,00	20,00
18	PCT NEGATIVE V	34,0	-34,0	-25,0	-34,0	-27,0	10,00	34,00	0,00	34,00
19	PCT MIXED V	0,0	18,0	0,0	0,0	27,0	9,00	27,00	0,00	27,00
20	PCT SCHOOL REF	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
21	PCT FAMILY REF	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
22	PCT COMBINATION	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
23	PAST/2ST/AFF/POS	0,0	5,0	0,0	0,0	0,0	1,00	5,00	0,00	5,00
24	PAST/2ND/AFF/POS	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
25	PAST/3RD/AFF/POS	3,0	-3,0	-3,0	-3,0	-3,0	0,60	3,00	0,00	3,00
26	PRES/1ST/AFF/POS	0,0	0,0	5,0	0,0	13,0	3,60	13,00	0,00	13,00
27	PRES/2ND/AFF/POS	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
28	PRES/3RD/AFF/POS	3,0	-3,0	-3,0	-3,0	-3,0	0,60	3,00	0,00	3,00
29	FUT/1ST/AFF/POS	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
30	FUT/2ND/AFF/POS	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
31	FUT/3RD/AFF/POS	0,0	0,0	5,0	0,0	0,0	1,00	5,00	0,00	5,00
32	PAST/1ST/AFF/MIX	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
33	PAST/2ND/AFF/MIX	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
34	PAST/3RD/AFF/MIX	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
35	PRES/1ST/AFF/MIX	0,0	9,0	0,0	0,0	13,0	4,40	13,00	0,00	13,00
36	PRES/2ND/AFF/MIX	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
37	PRES/3RD/AFF/MIX	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
38	FUT/1ST/AFF/MIX	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
39	FUT/2ND/AFF/MIX	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
40	FUT/3RD/AFF/MIX	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
41	PAST/1ST/AFF/NEG	3,0	-3,0	-3,0	-3,0	-3,0	0,60	3,00	0,00	3,00
42	PAST/2ND/AFF/NEG	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
43	PAST/3RD/AFF/NEG	3,0	-3,0	-3,0	-3,0	-3,0	0,60	3,00	0,00	3,00
44	PRES/1ST/AFF/NEG	24,0	-24,0	-19,0	-24,0	-24,0	5,80	24,00	0,00	24,00
45	PRES/2ND/AFF/NEG	0,0	0,0	0,0	0,0	7,0	1,40	7,00	0,00	7,00
46	PRES/3RD/AFF/NEG	8,0	-8,0	-3,0	-8,0	-8,0	2,60	8,00	0,00	8,00
47	FUT/1ST/AFF/NEG	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
48	FUT/2ND/AFF/NEG	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
49	FUT/3RD/AFF/NEG	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
50	PAST/1ST/MIX/POS	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
51	PAST/2ND/MIX/POS	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
52	PAST/3RD/MIX/POS	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00
53	PRES/1ST/MIX/POS	3,0	-3,0	-3,0	-3,0	-3,0	0,60	3,00	0,00	3,00
54	PRES/2ND/MIX/POS	0,0	0,0	0,0	0,0	7,0	1,40	7,00	0,00	7,00
55	PRES/3RD/MIX/POS	3,0	-3,0	-3,0	-3,0	-3,0	0,60	3,00	0,00	3,00
56	FUT/1ST/MIX/POS	0,0	0,0	0,0	0,0	0,0	0,00	-0,00	0,00	0,00
57	FUT/2ND/MIX/POS	0,0	0,0	0,0	0,0	0,0	0,00	0,00	0,00	0,00

98	FUT/3RD/MIX/POS	30.0	0.0	0.0	0.0	0.0	30.00	30.00	30.00	0.00
99	PAST/1ST/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
100	PAST/2ND/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
101	PAST/3RD/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
102	PRES/1ST/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
103	PRES/2ND/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
104	PRES/3RD/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
105	FUT/1ST/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
106	FUT/2ND/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
107	FUT/3RD/MIX/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
108	PAST/1ST/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
109	PAST/2ND/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
110	PAST/3RD/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
111	PRES/1ST/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
112	PRES/2ND/MIX/NEG	30.0	-30.0	-30.0	-30.0	-30.0	6.00	30.00	0.00	30.00
113	PRES/3RD/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
114	FUT/1ST/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
115	FUT/2ND/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
116	FUT/3RD/MIX/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
117	PAST/1ST/COGNATE	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
118	PAST/2ND/COGNATE	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
119	PAST/3RD/GOGNATE	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
120	PRES/1ST/GOGNATR	1.0	-1.0	-1.0	0.0	-1.0	0.40	1.00	0.00	1.00
121	PRES/2ND/COGNATE	80.0	10.0	-30.0	-40.0	-80.0	32.00	90.00	0.00	90.00
122	PRES/3RD/COGNATE	0.0	0.0	0.0	0.0	2.0	0.40	2.00	0.00	2.00
123	FUT/1ST/COGNATE	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
124	FUT/2ND/COGNATE	30.0	-30.0	-30.0	-30.0	-30.0	6.00	30.00	0.00	30.00
125	FUT/3RD/COGNATE	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
126	PAST/1ST/NEUTRAL	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
127	PAST/2ND/NEUTRAL	30.0	-30.0	20.0	-30.0	-30.0	16.00	50.00	0.00	50.00
128	PAST/3RD/NEUTRAL	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
129	PRES/1ST/NEUTRAL	2.0	51.0	0.0	-2.0	0.0	11.80	53.00	0.00	53.00
130	PRES/2ND/NEUTRAL	10.0	10.0	60.0	-10.0	-10.0	20.00	70.00	0.00	70.00
131	PRES/3RD/NEUTRAL	30.0	-26.0	23.0	-22.0	41.0	33.20	71.00	4.00	67.00
132	FUT/1ST/NEYTRAL	30.0	-20.0	30.0	30.0	0.0	38.00	60.00	10.00	50.00
133	FUT/2ND/NEUTRAL	0.0	0.0	50.0	0.0	0.0	10.00	50.00	0.00	50.00
134	FUT/3RD/NEUTRAL	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
135	PAST 1ST PERSON	5.0	0.0	0.0	-5.0	-5.0	3.00	5.00	0.00	5.00
136	PAST 2ND PERSON	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
137	PAST 3RD PERSON	5.0	0.0	-5.0	-5.0	-5.0	2.00	5.00	0.00	5.00
138	PRES 1ST PERSON	68.0	-18.0	-27.0	-54.0	-21.0	44.00	68.00	14.00	54.00
139	PRES 2ND PERSON	3.0	-3.0	2.0	-3.0	17.0	5.60	20.00	0.00	20.00
140	PRES 3RD PERSON	16.0	25.0	25.0	70.0	17.0	43.40	86.00	16.00	70.00
141	FUT 1ST PERSON	3.0	-3.0	2.0	-3.0	-3.0	1.60	5.00	0.00	5.00
142	FUT 2ND PERSON	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
143	FUT 3RD PERSON	0.0	0.0	5.0	0.0	0.0	1.00	5.00	0.00	5.00
144	AFFECT POSITIVE	5.0	0.0	4.0	-5.0	8.0	6.40	13.00	0.00	13.00
145	AFFECT MIXED	0.0	9.0	0.0	0.0	13.0	4.40	13.00	0.00	13.00
146	AFFECT NEGATIVE	37.0	-37.0	-28.0	-37.0	-30.0	10.60	37.00	0.00	37.00
147	MIXED POSITIVE	5.0	-5.0	-5.0	-5.0	2.0	2.40	7.00	0.00	7.00
148	MIXED MIXED	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
149	MIXED NEGATIVE	3.0	-3.0	-3.0	-3.0	-3.0	0.60	3.00	0.00	3.00
150	COGNITIVE	21.0	-12.0	-16.0	-7.0	-1.0	13.80	21.00	5.00	16.00
151	NEUTRAL	29.0	48.0	48.0	57.0	11.0	61.80	86.00	29.00	57.00
152	AFFECTIVE TOTAL	42.0	-28.0	-24.0	-42.0	-9.0	21.40	42.00	0.00	42.00
153	MIXED TOTAL	8.0	-8.0	-8.0	-8.0	-1.0	3.00	8.00	0.00	8.00
154	AFFECT+MIXED	50.0	-36.0	-32.0	-50.0	-10.0	24.40	50.00	0.00	50.00